

FIG. 2

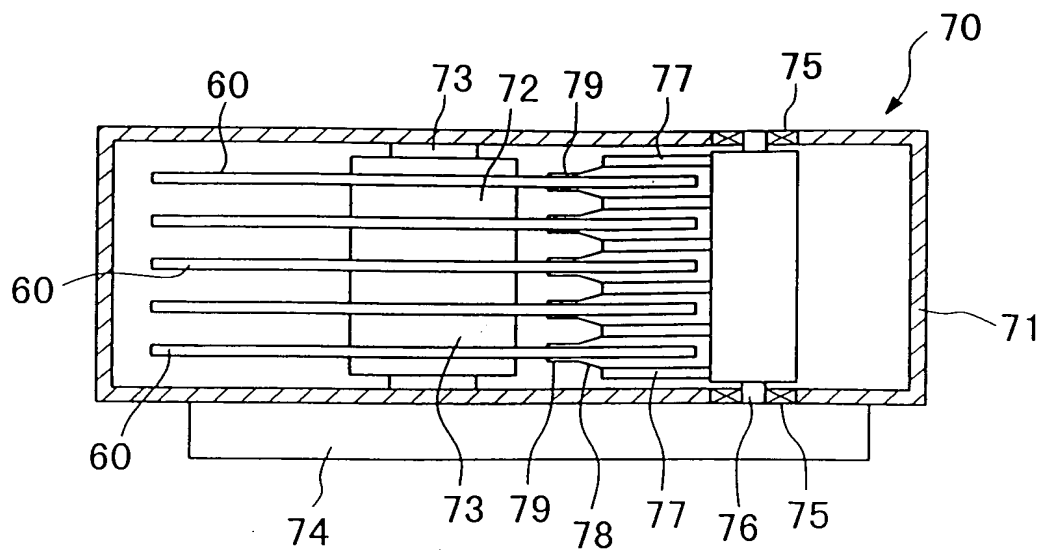


FIG. 3

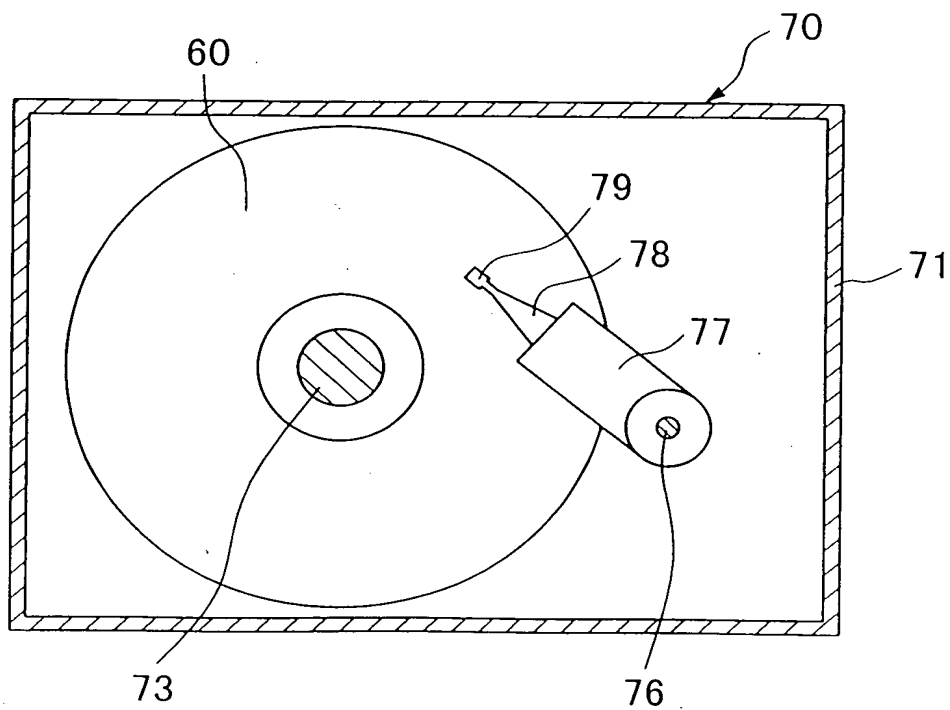
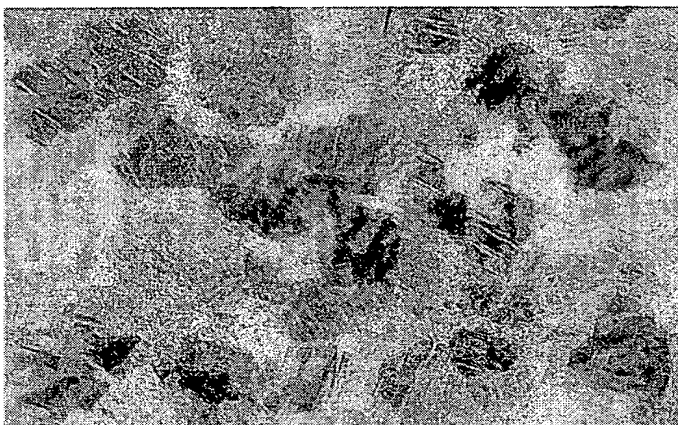


FIG. 4A

 $\text{Cr/CoNi}_{12.5}\text{Cr}_{15}\text{Ta}_{3.5}\text{Pt}_5$  : 5nm/15nm $\text{O}_2$  : 0L

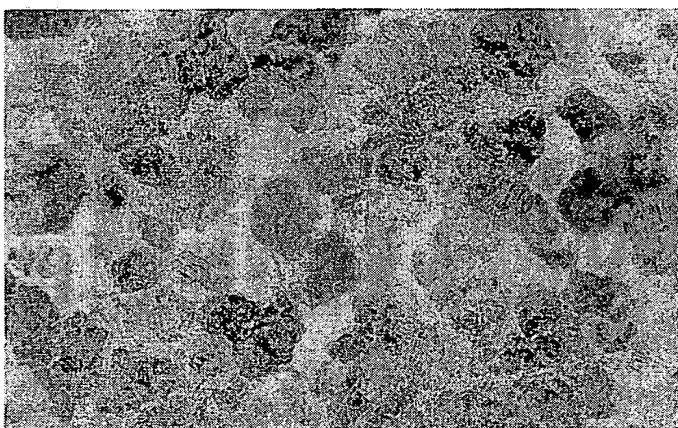
G. D. : 10.8nm

FIG. 4B

 $\text{O}_2$  : 1.5L

G. D. : 9.8nm

FIG. 4C

 $\text{O}_2$  : 3.5L

G. D. : 9.3nm

20nm

FIG. 5

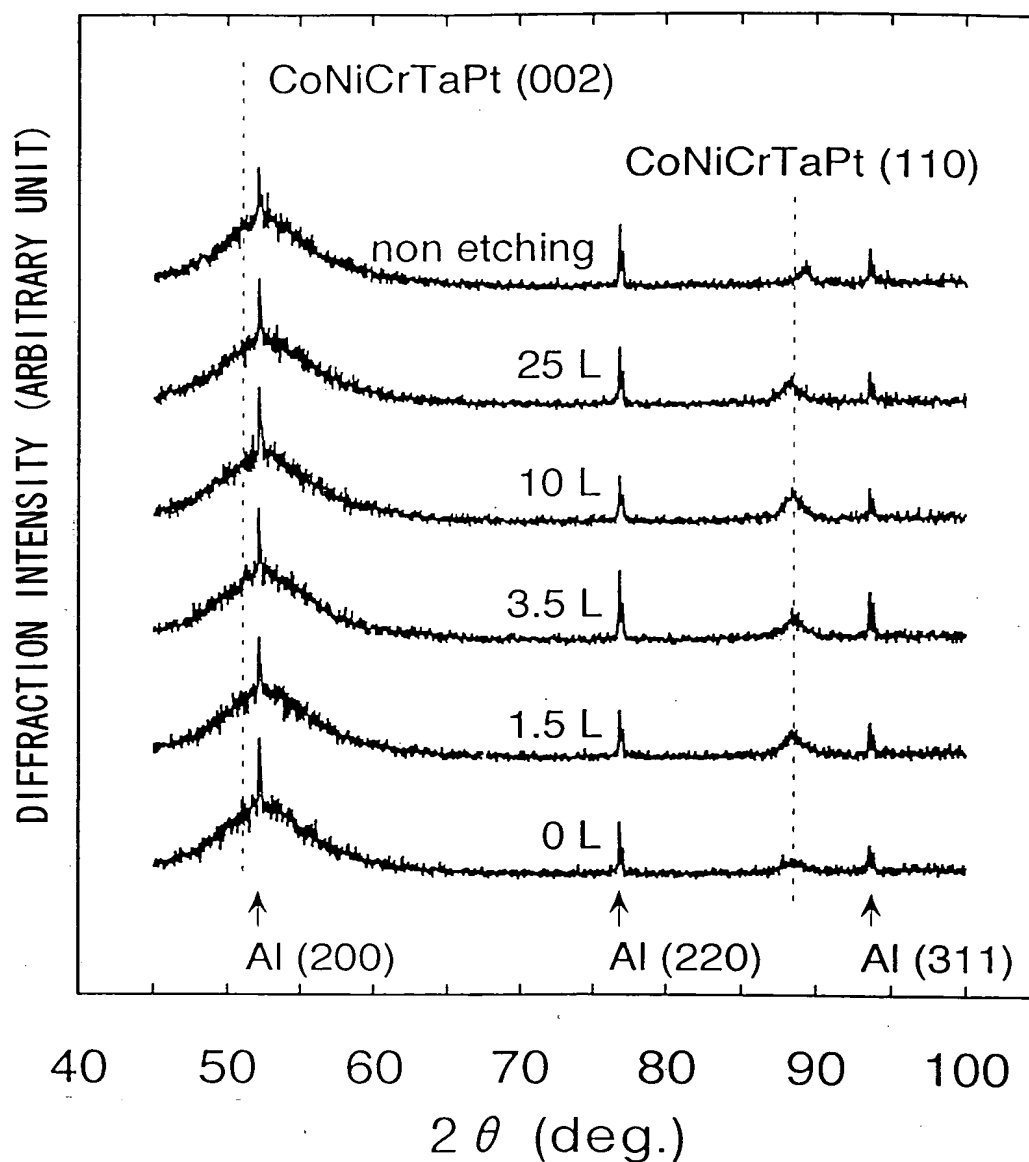
Al-sub. - Cr /  $\text{CoNi}_{12.5}\text{Cr}_{15}\text{Ta}_{3.5}\text{Pt}_5$ = 5 / 30 nm,  $T_{\text{sub.}} : 250^\circ\text{C}$  $T_{\text{DE}} : 5 \text{ sec}$  ( $\text{O}_2$  EXPOSURE IMMEDIATELY  
BEFORE FILM FORMATION)

FIG. 6

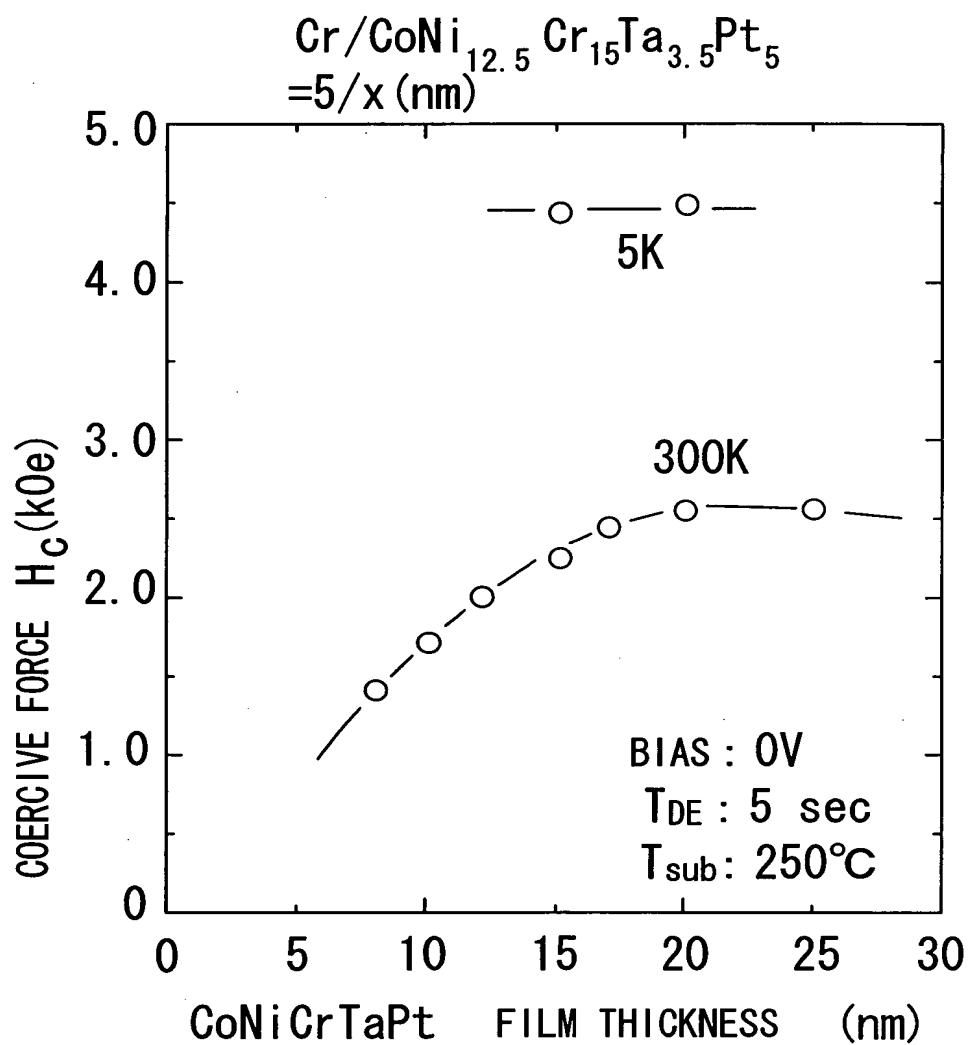


FIG. 7

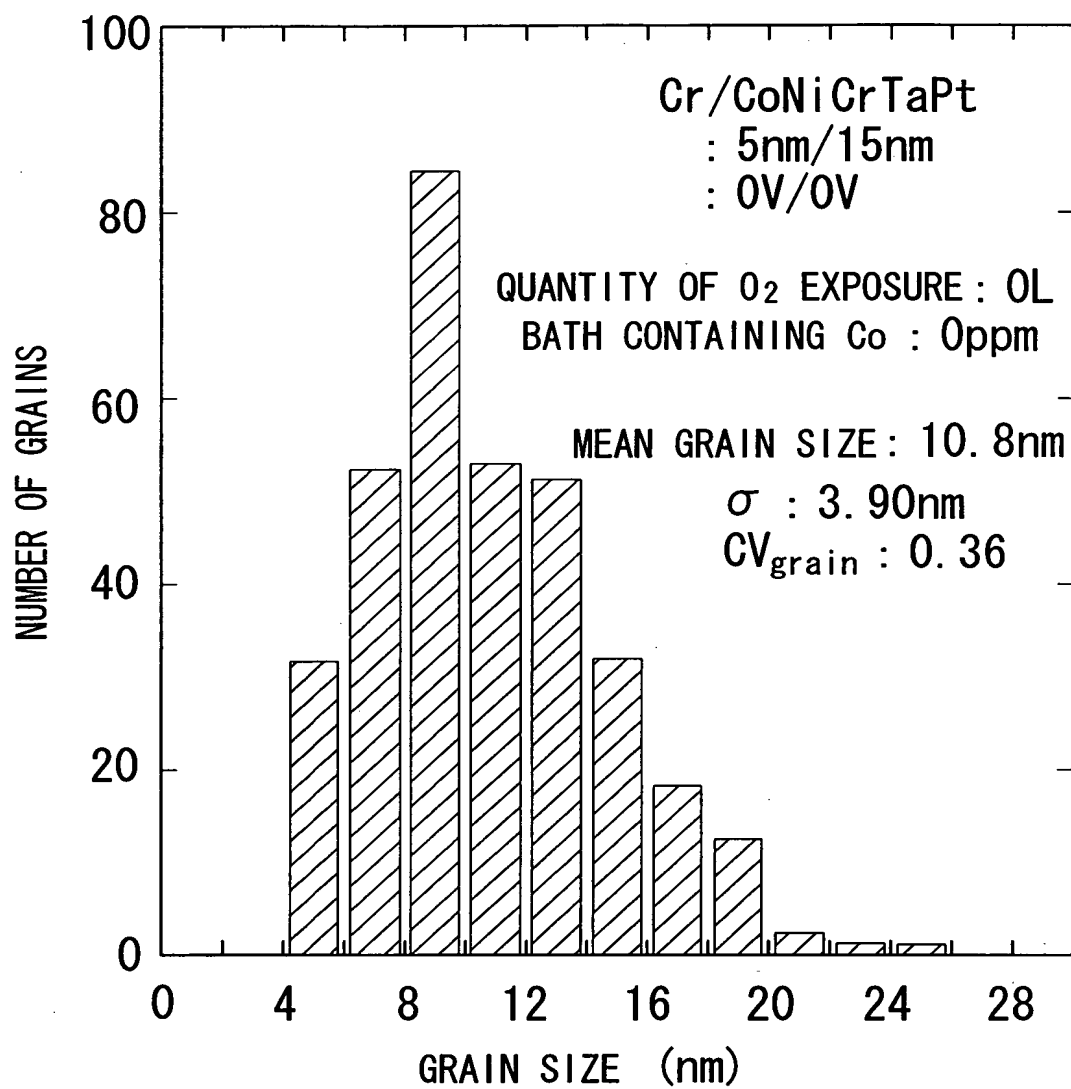


FIG. 8

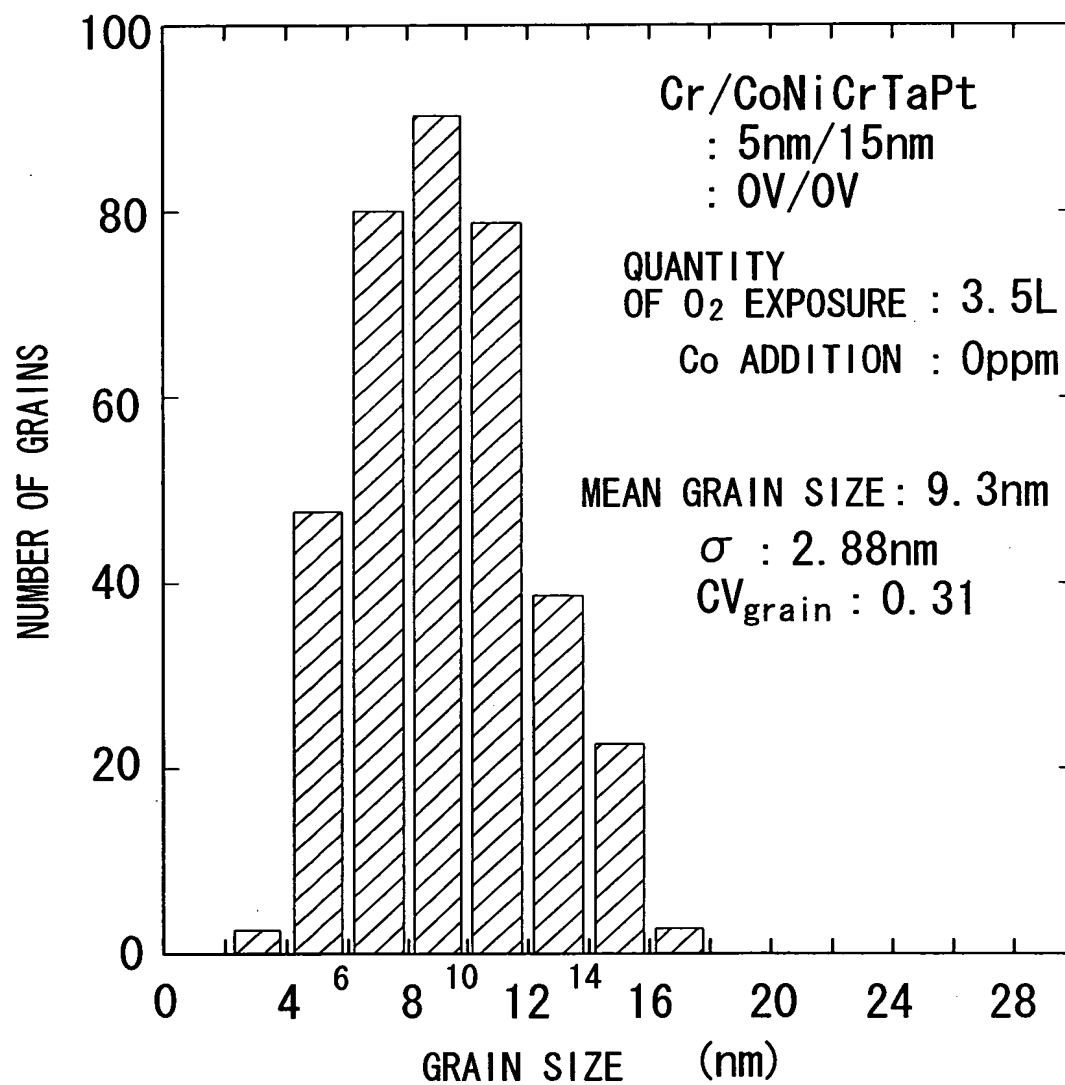


FIG. 9

Cr/Co<sub>64</sub>Ni<sub>12.5</sub>Cr<sub>15</sub>Ta<sub>3.5</sub>Pt<sub>5</sub> (5nm/15nm)

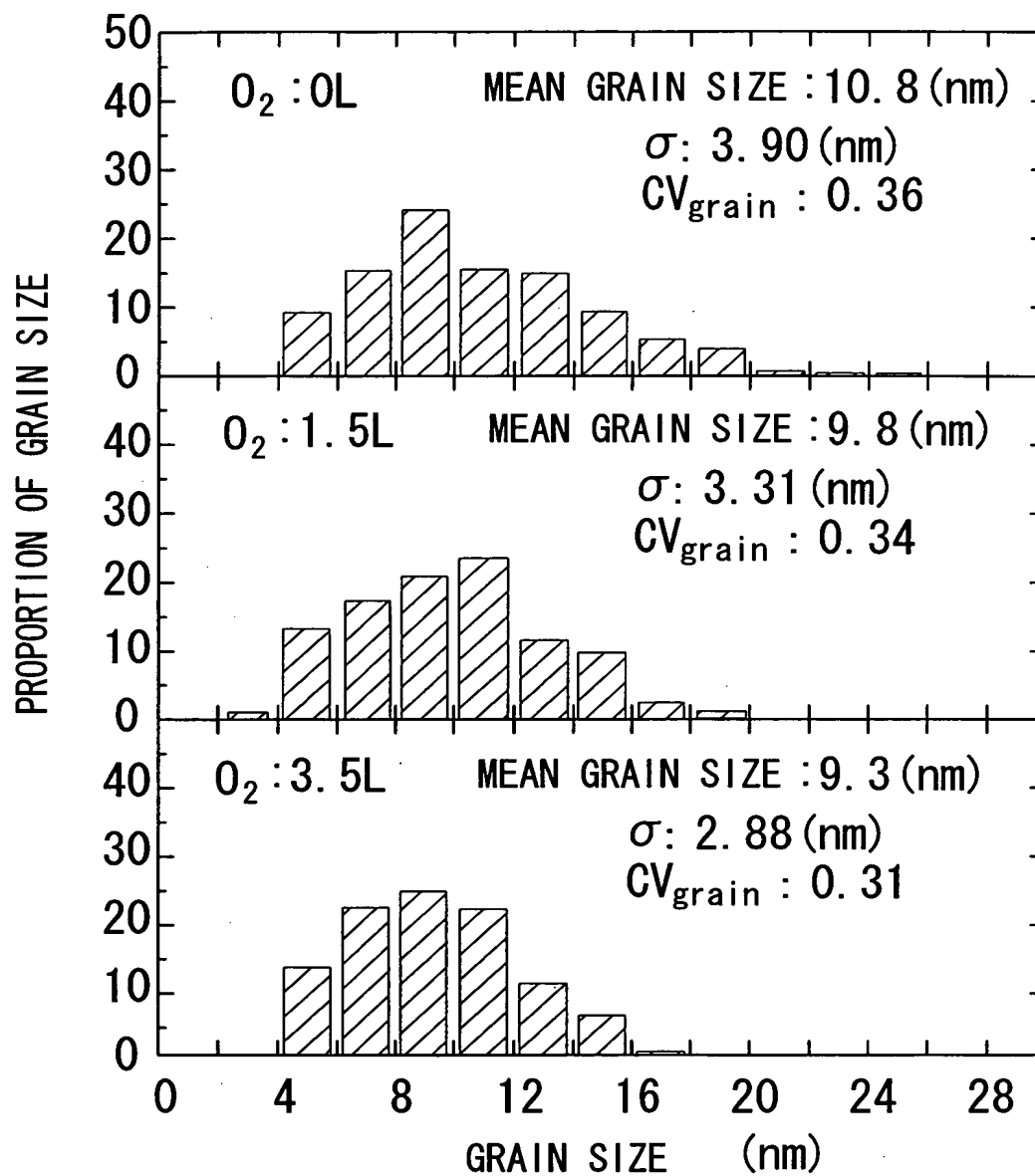




FIG. 10

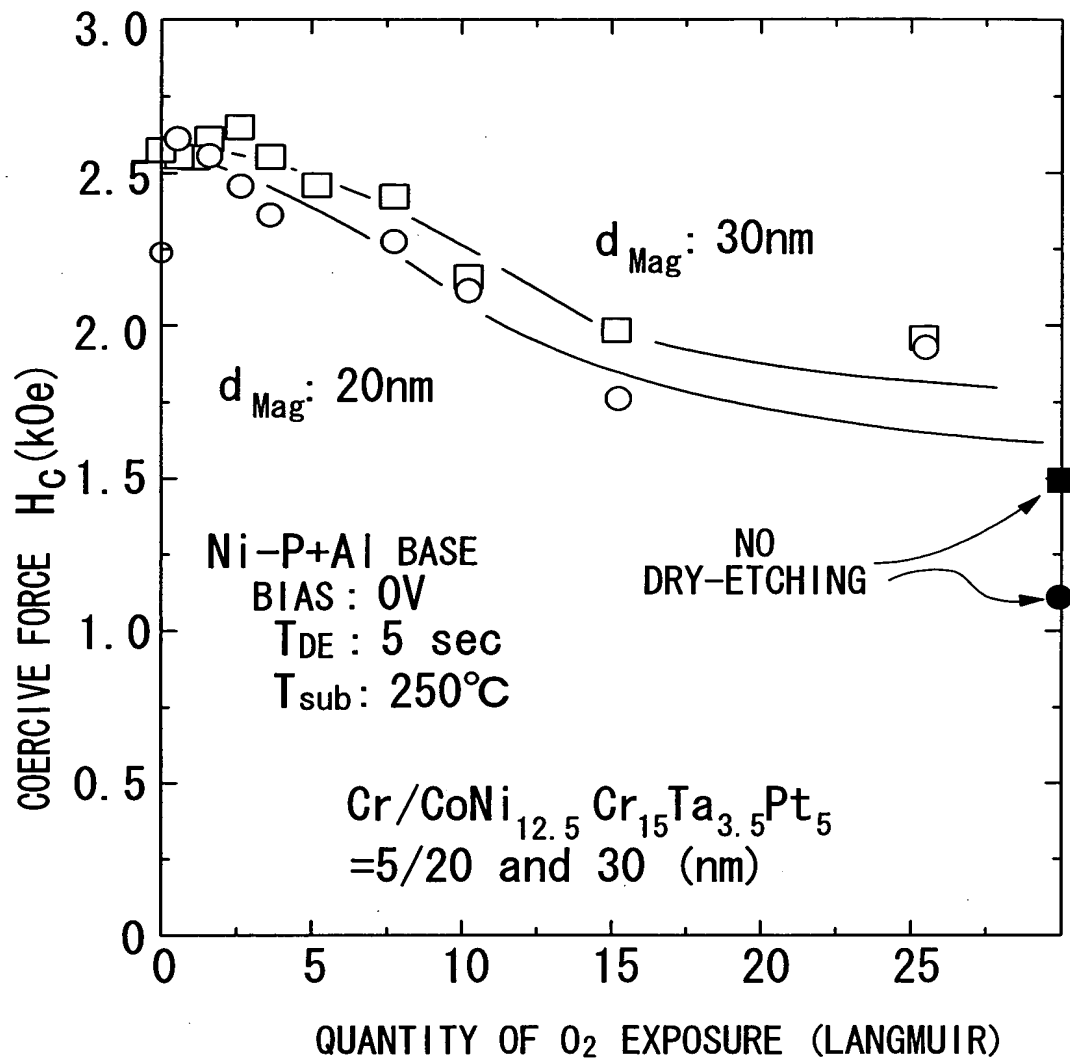


FIG. 11

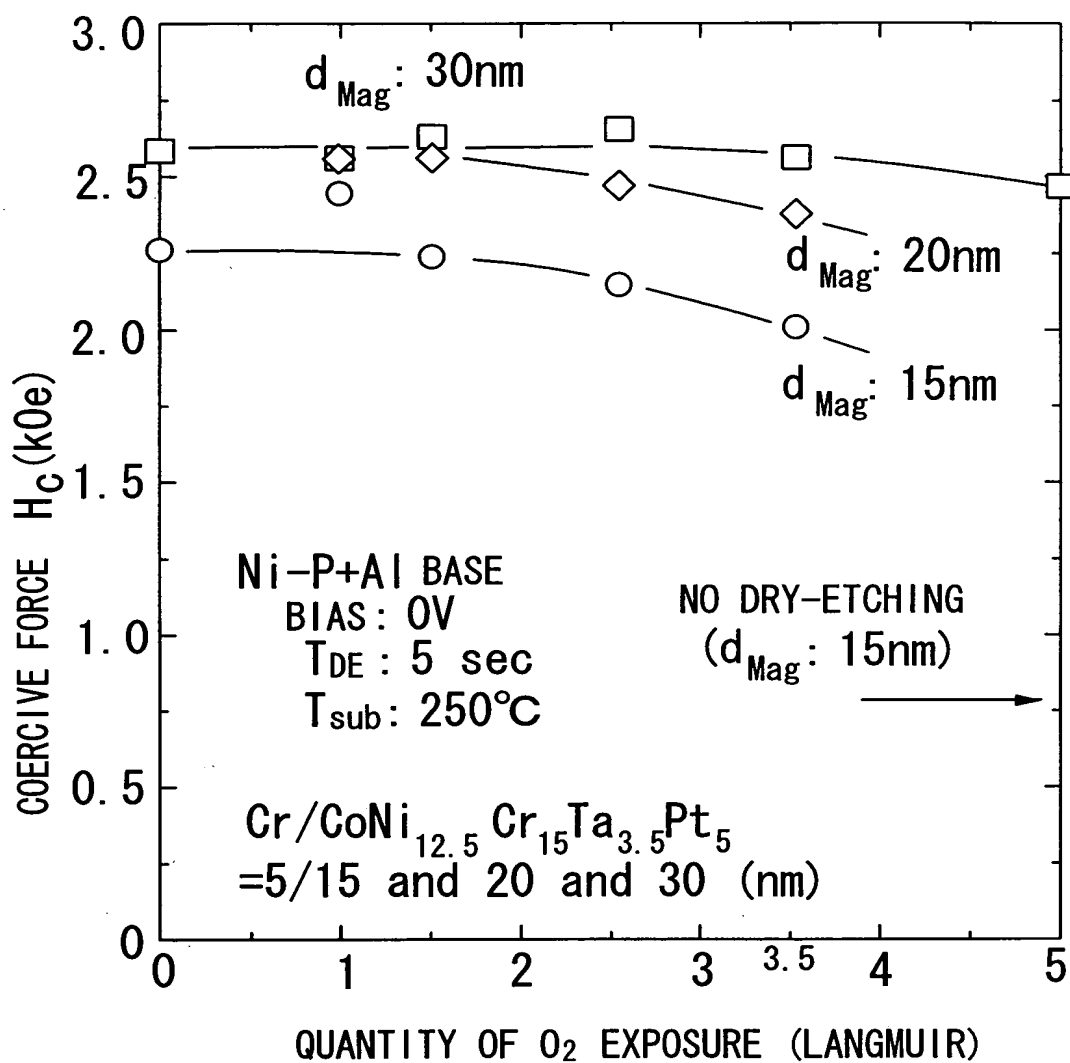


FIG. 12

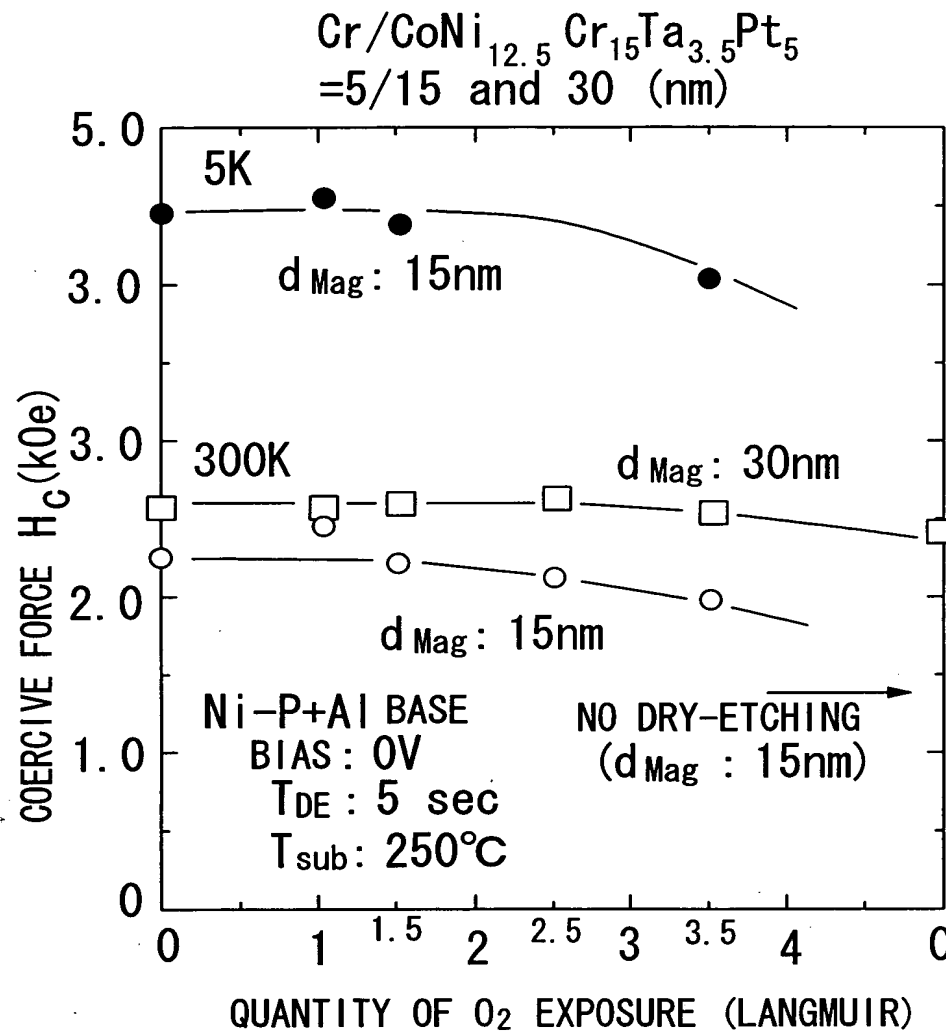


FIG. 13

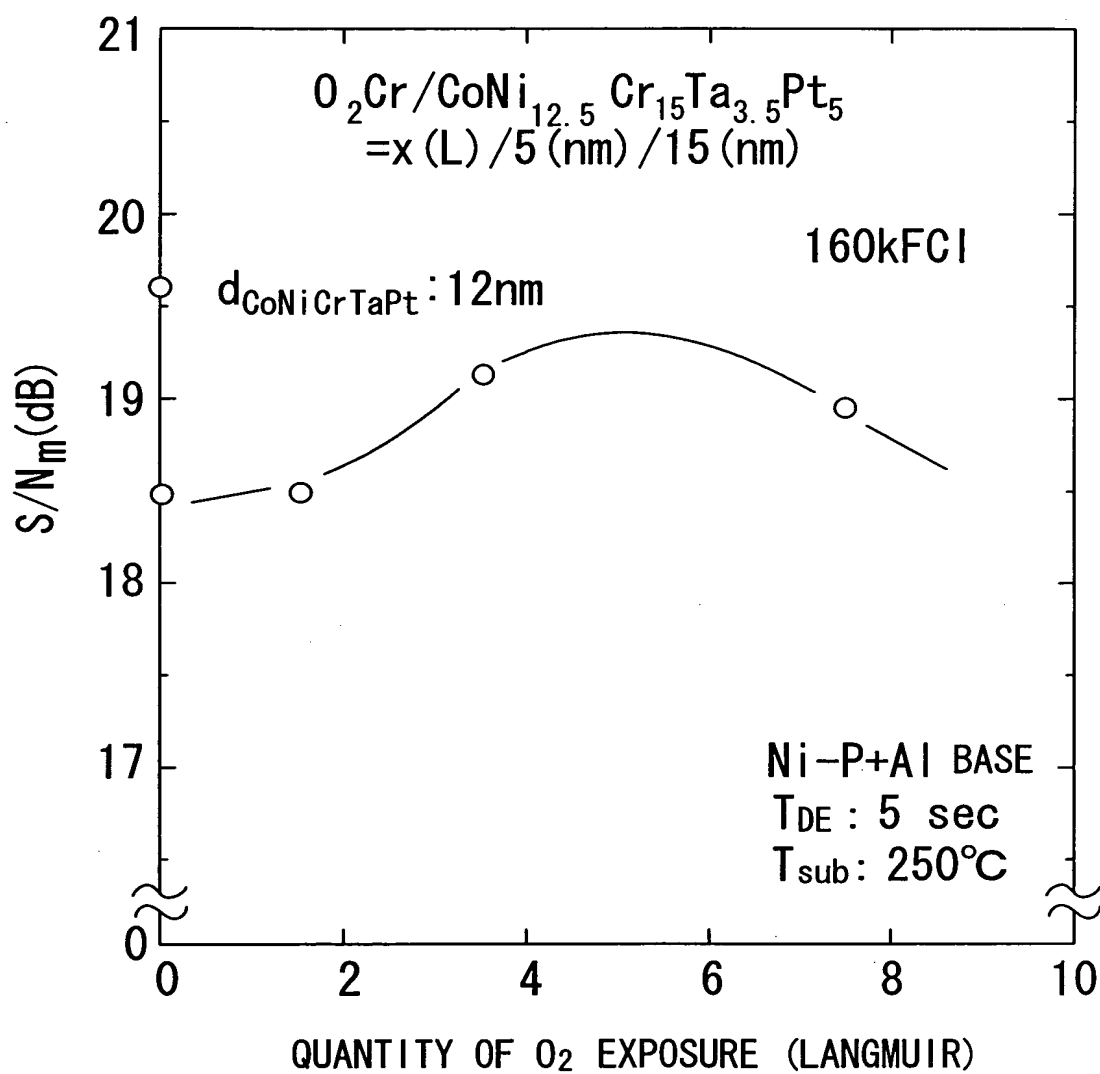
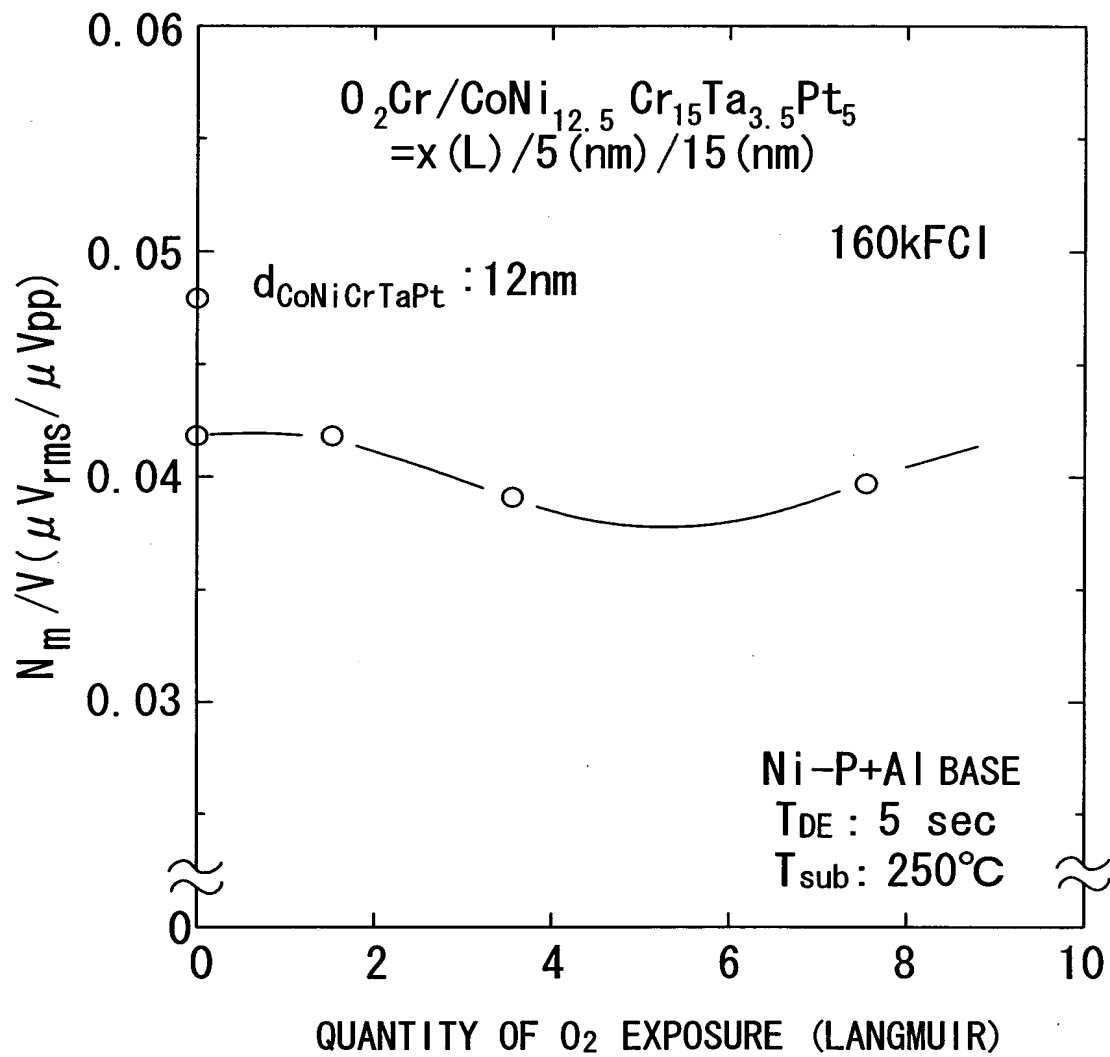


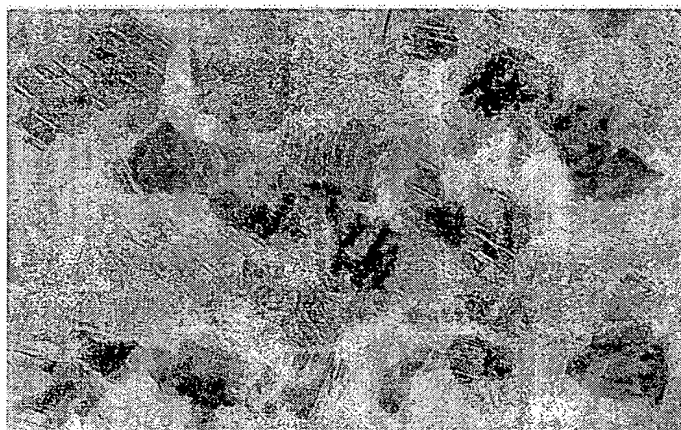
FIG. 14



$\text{Cr/CoNi}_{12.5}\text{Cr}_{15}\text{Ta}_{3.5}\text{Pt}_5$  : 5nm/15nm

FIG. 15A

QUANTITY OF  $\text{O}_2$  EXPOSURE : 1.5L

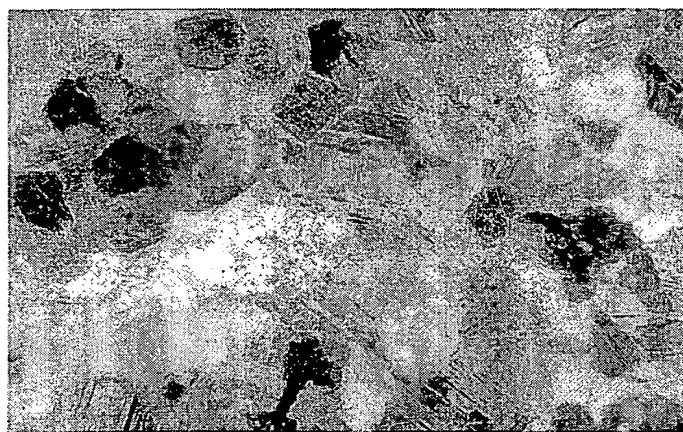


Co CONTENT  
: 0ppm

G. D. : 9.8nm

20nm

FIG. 15B



Co CONCENTRATION  
: 30ppm

Co CONTENT  
: 0.003 (wt. %)

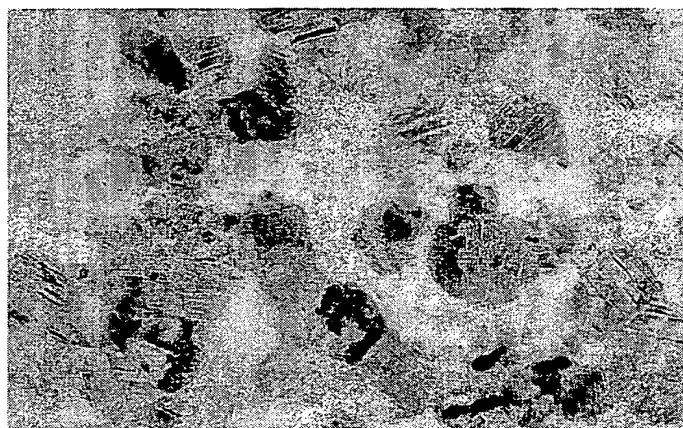
G. D. : 9.6nm

20nm

Cr/CoNi<sub>12.5</sub>Cr<sub>15</sub>Ta<sub>3.5</sub>Pt<sub>5</sub> : 5nm/15nm

FIG. 16A

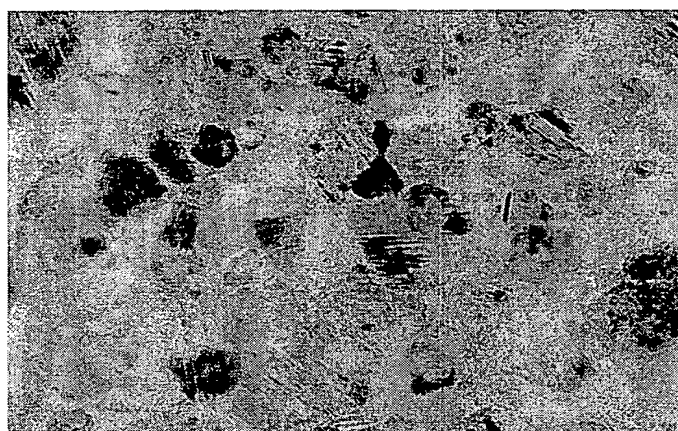
QUANTITY OF O<sub>2</sub> EXPOSURE : 1.5L



Co CONCENTRATION  
: 100ppm  
Co CONTENT  
: 0.04 (wt. %)  
G. D. : 8.8nm

20nm

FIG. 16B



Co CONCENTRATION  
: 300ppm  
Co CONTENT  
: 0.13 (wt. %)  
G. D. : 8.6nm

20nm

FIG. 17

$\text{O}_2 / \text{Cr} / \text{CoNi}_{12.5}\text{Cr}_{15}\text{Ta}_{3.5}\text{Pt}_5$   
= 1.5 L / 5 / 15 nm,  $T_{\text{sub.}} : 250^\circ\text{C}$

$T_{\text{DE}} : 5 \text{ sec}$  ( $\text{O}_2$  EXPOSURE IMMEDIATELY  
BEFORE FILM FORMATION)

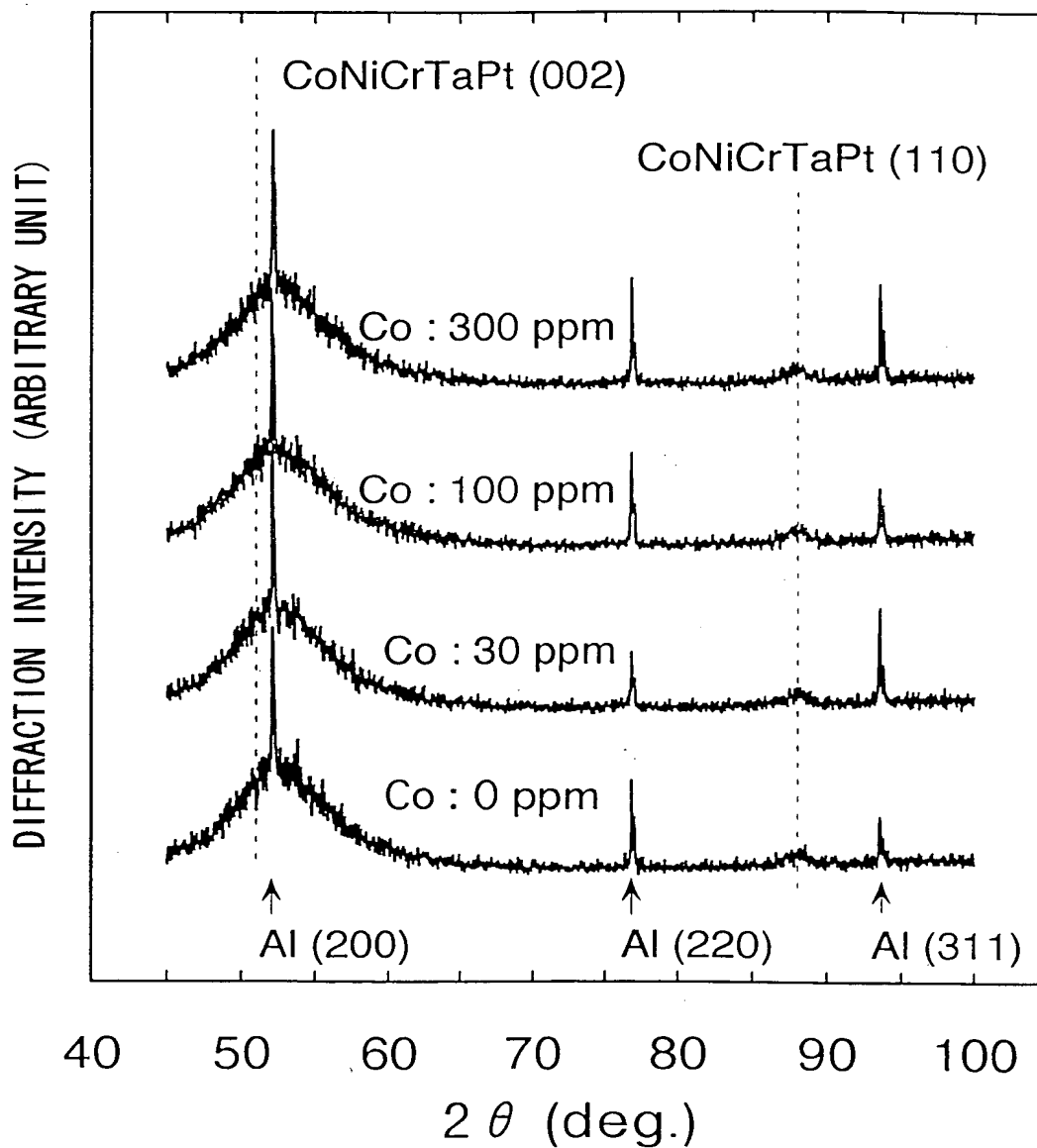




FIG. 18

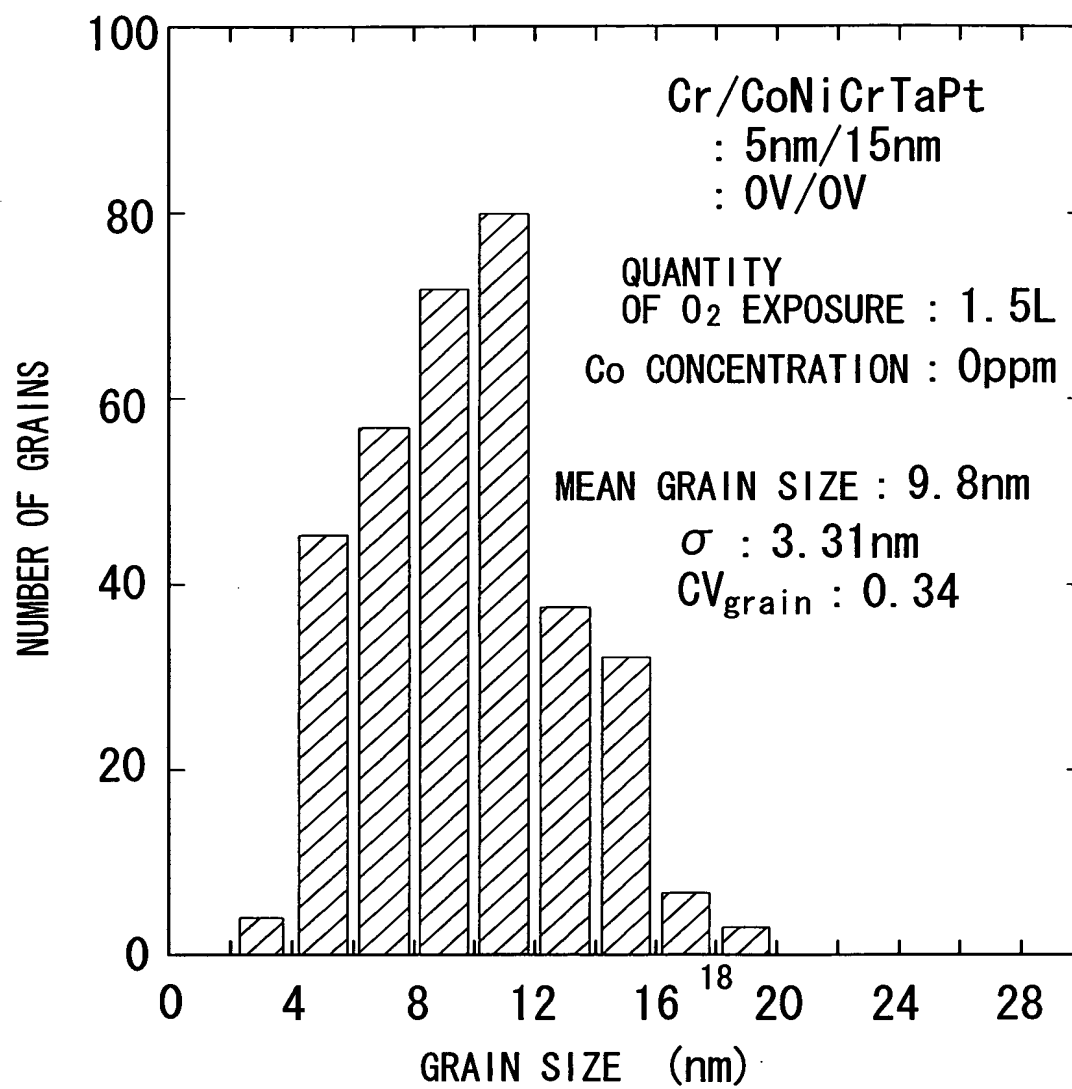


FIG. 19

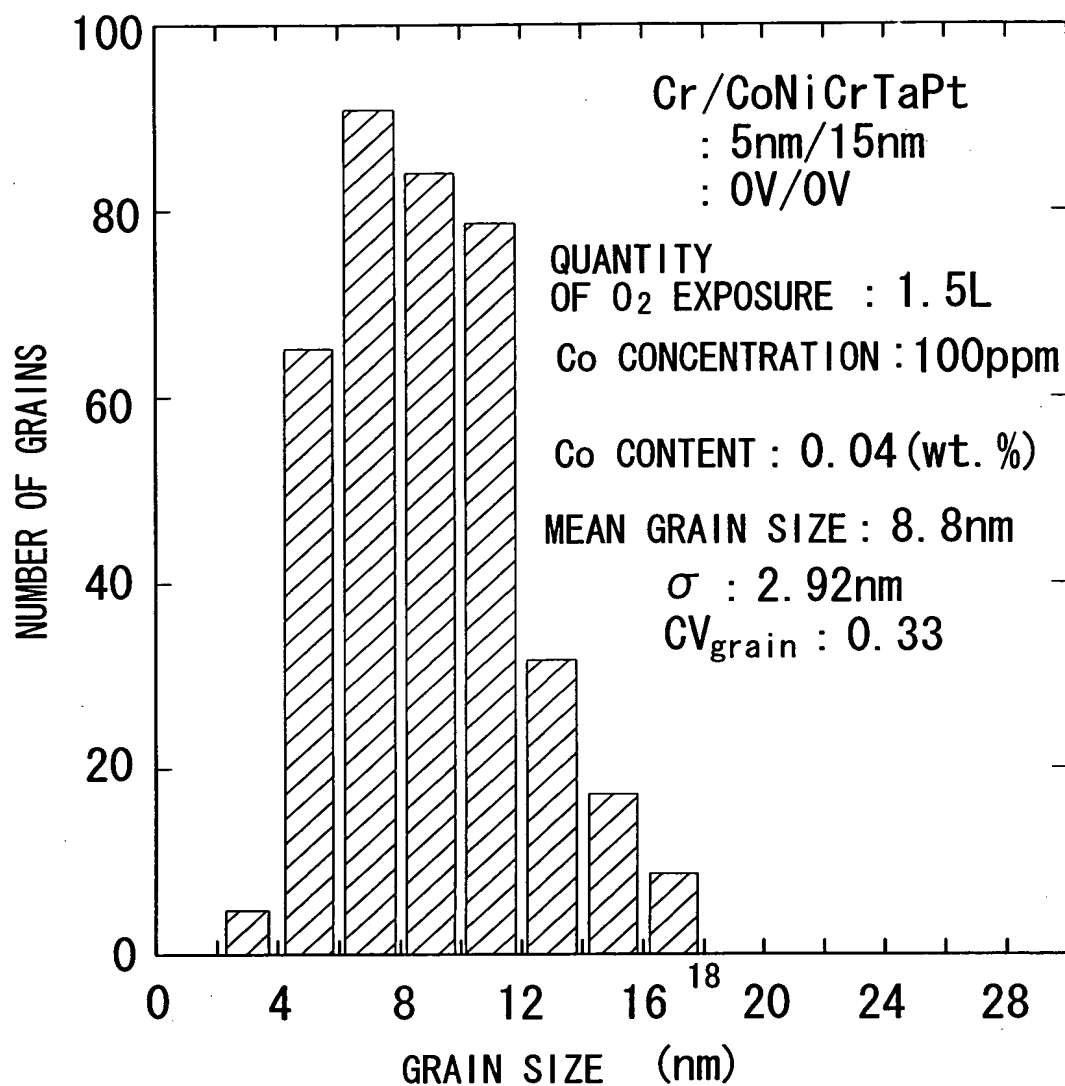


FIG. 20

Cr/Co<sub>64</sub>Ni<sub>12.5</sub>Cr<sub>15</sub>Ta<sub>3.5</sub>Pt<sub>5</sub> (5/15nm)  
(O<sub>2</sub>:1.5L)

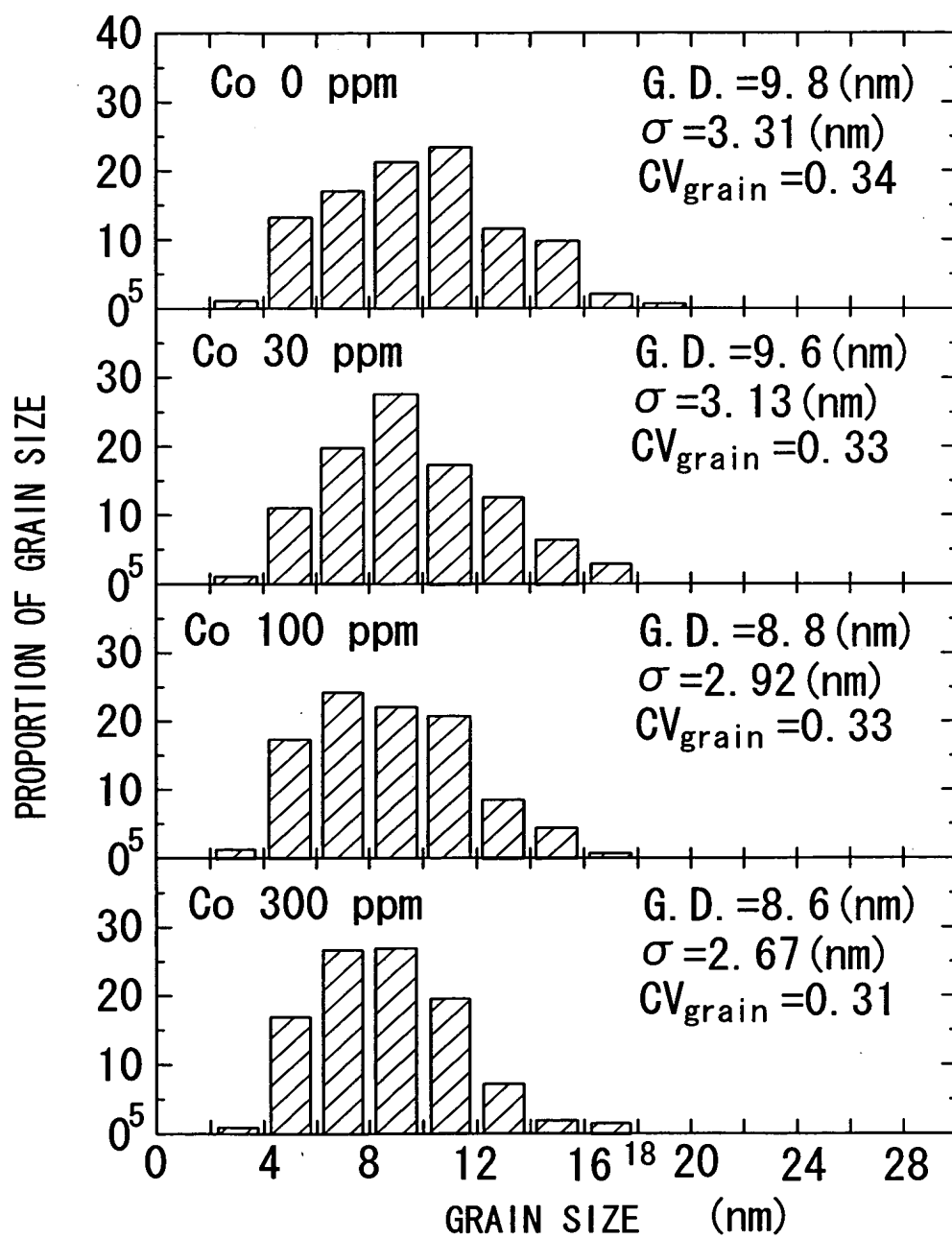


FIG. 21

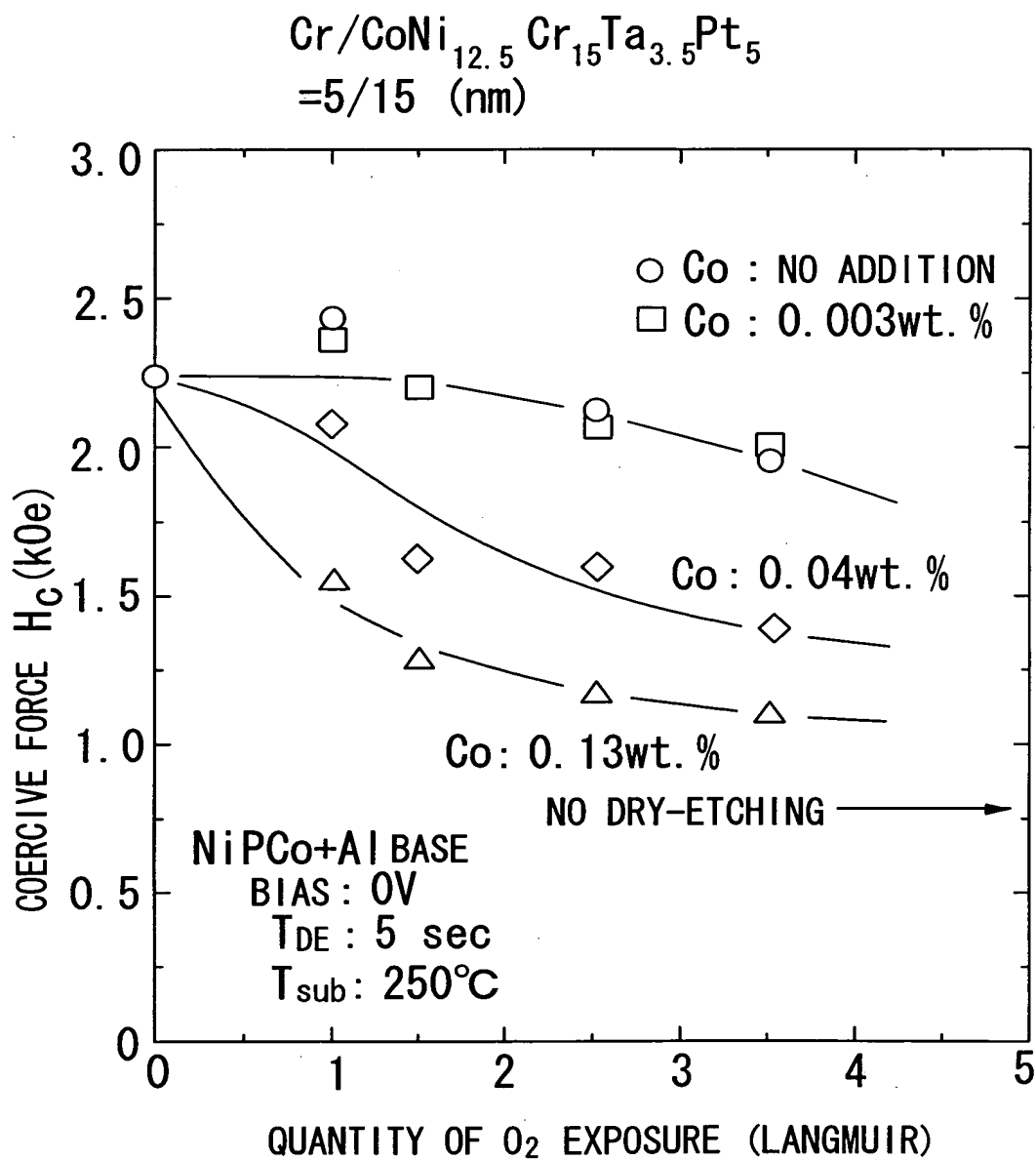


FIG. 22

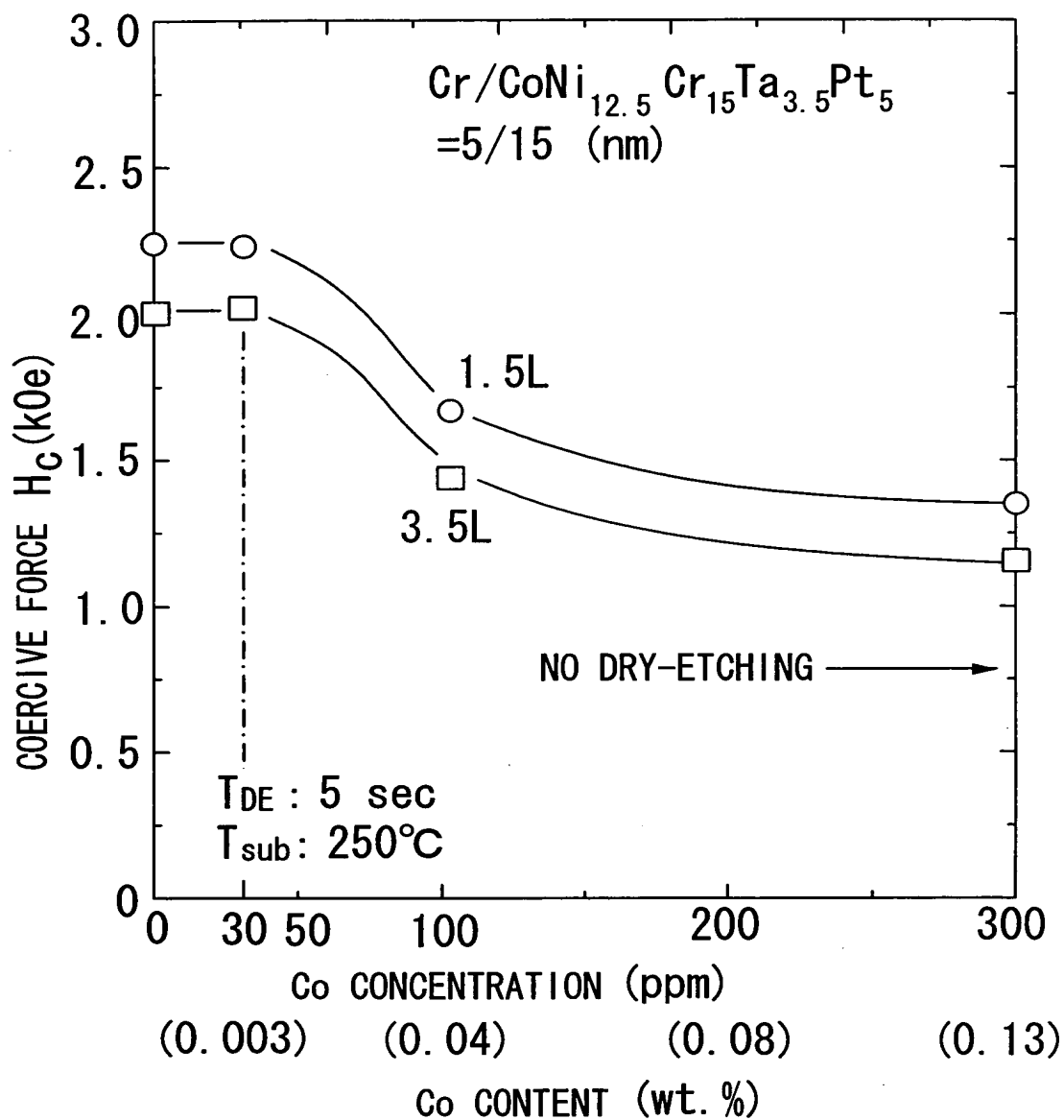


FIG. 23

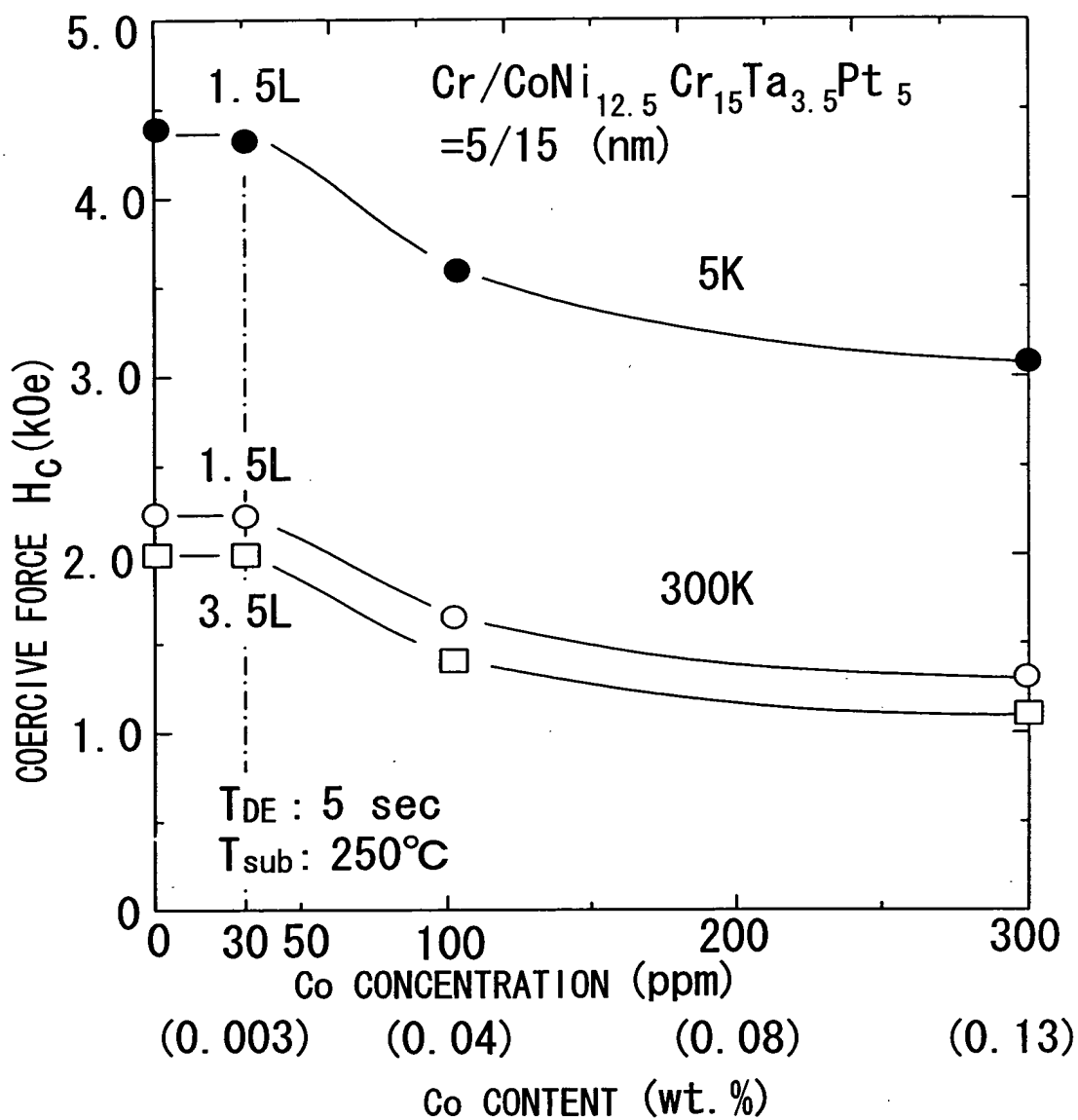


FIG. 24

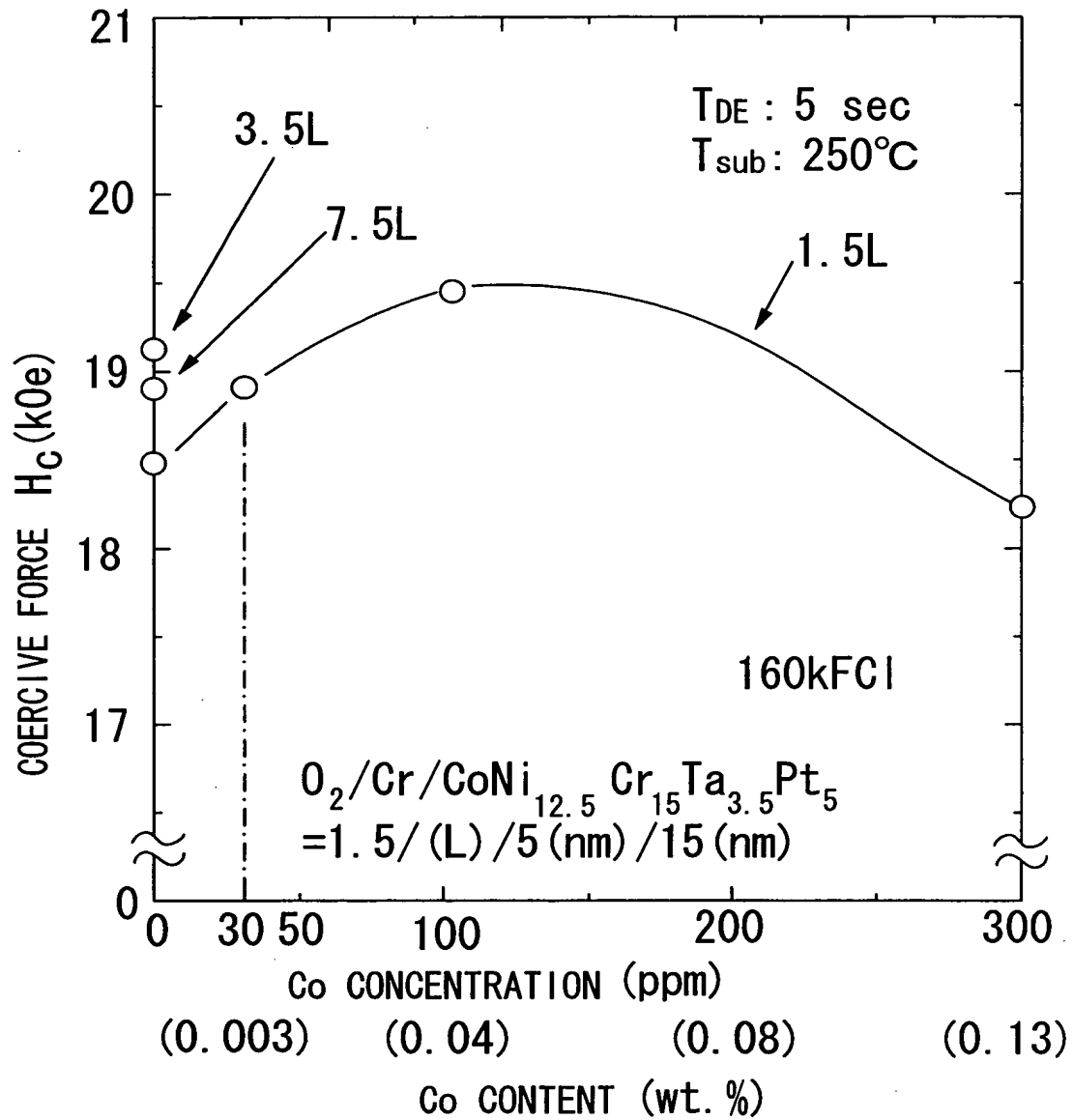


FIG. 25

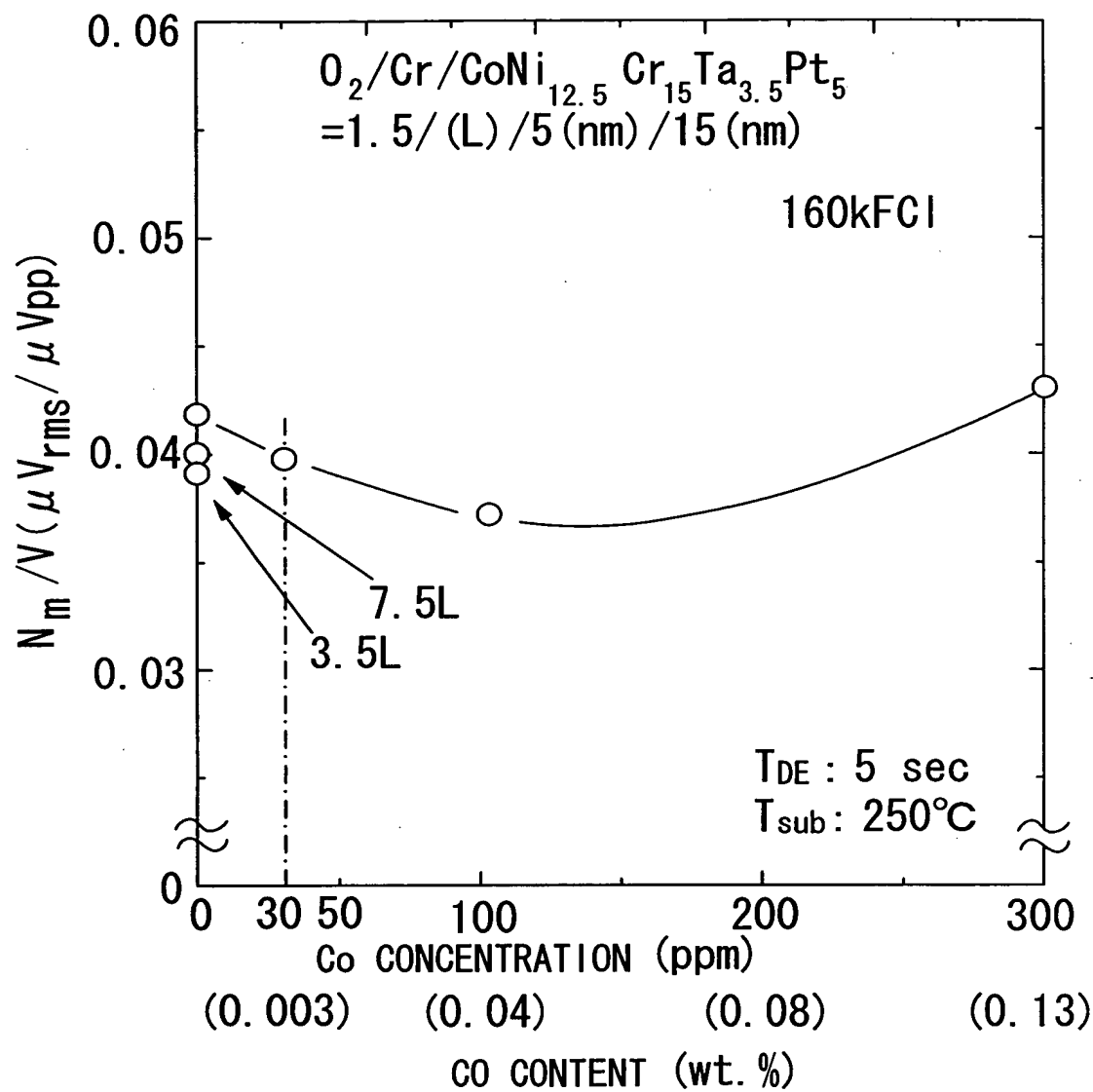




FIG. 26

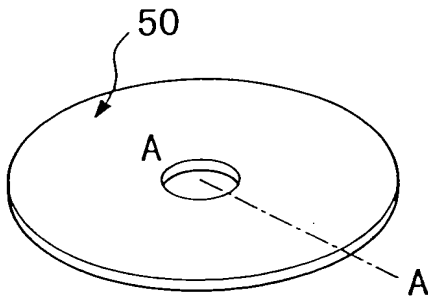


FIG. 27

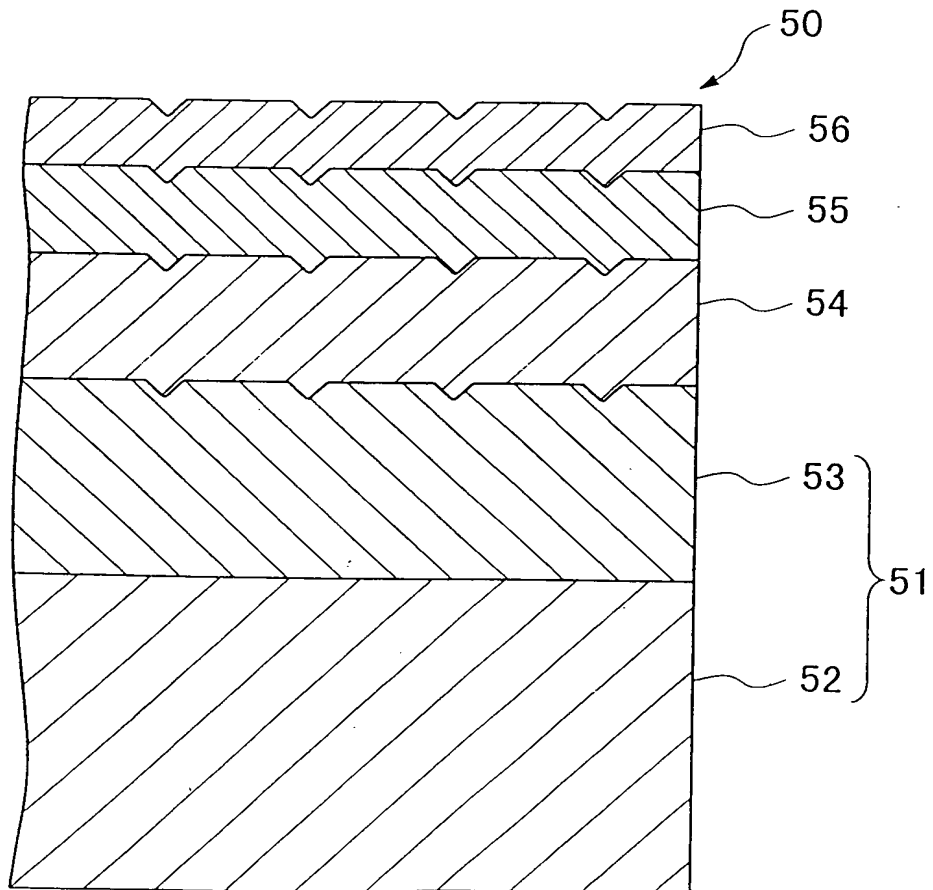


FIG. 28

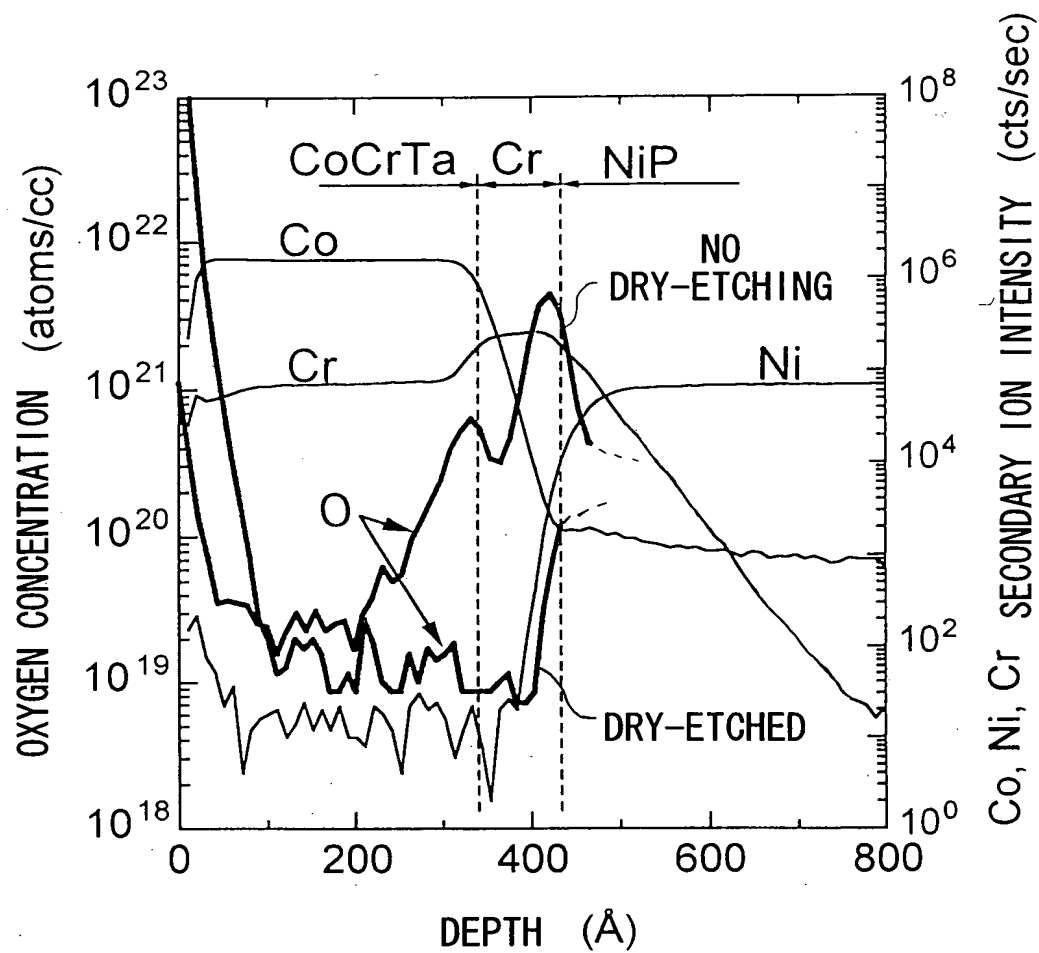


FIG. 29

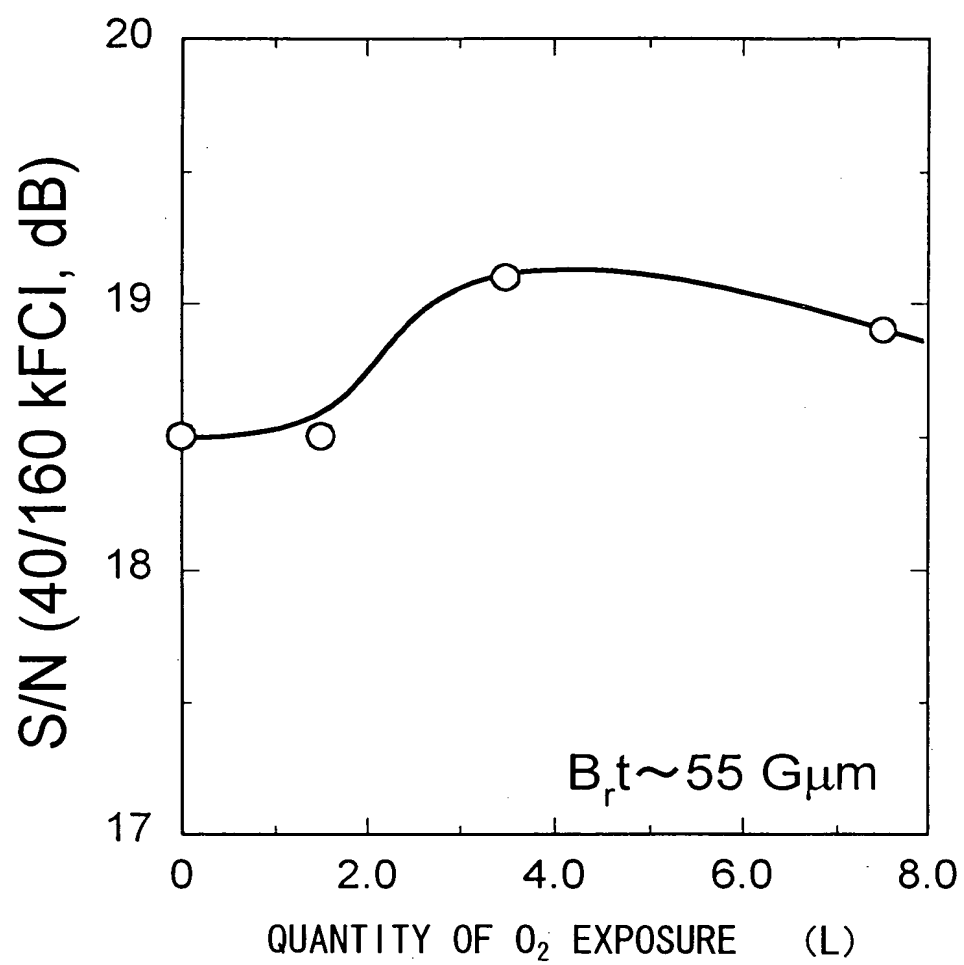


FIG. 30

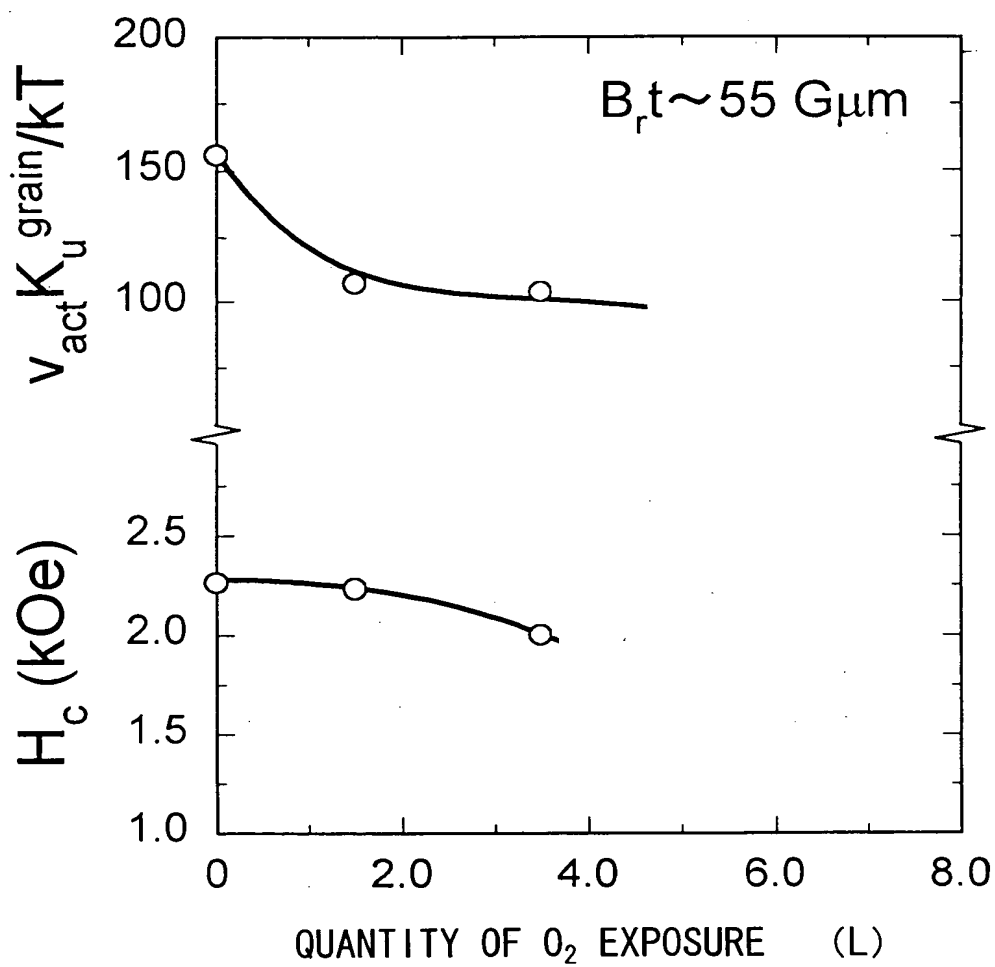


FIG. 31

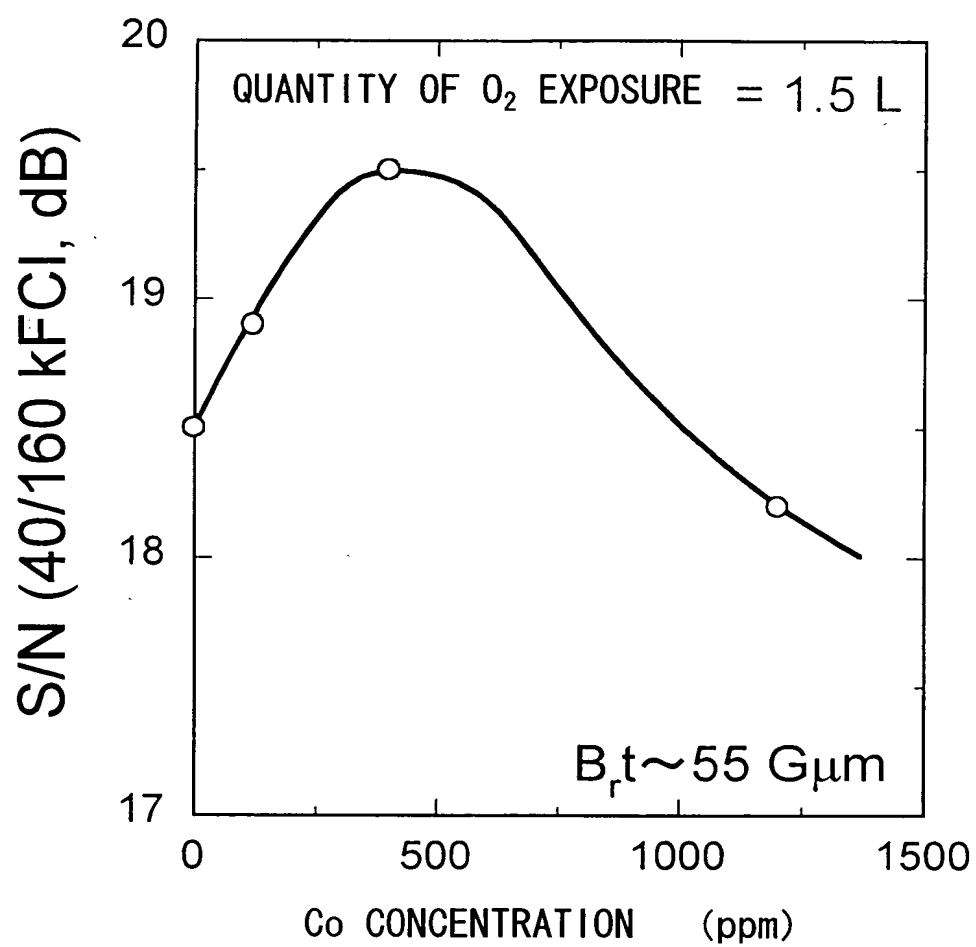


FIG. 32

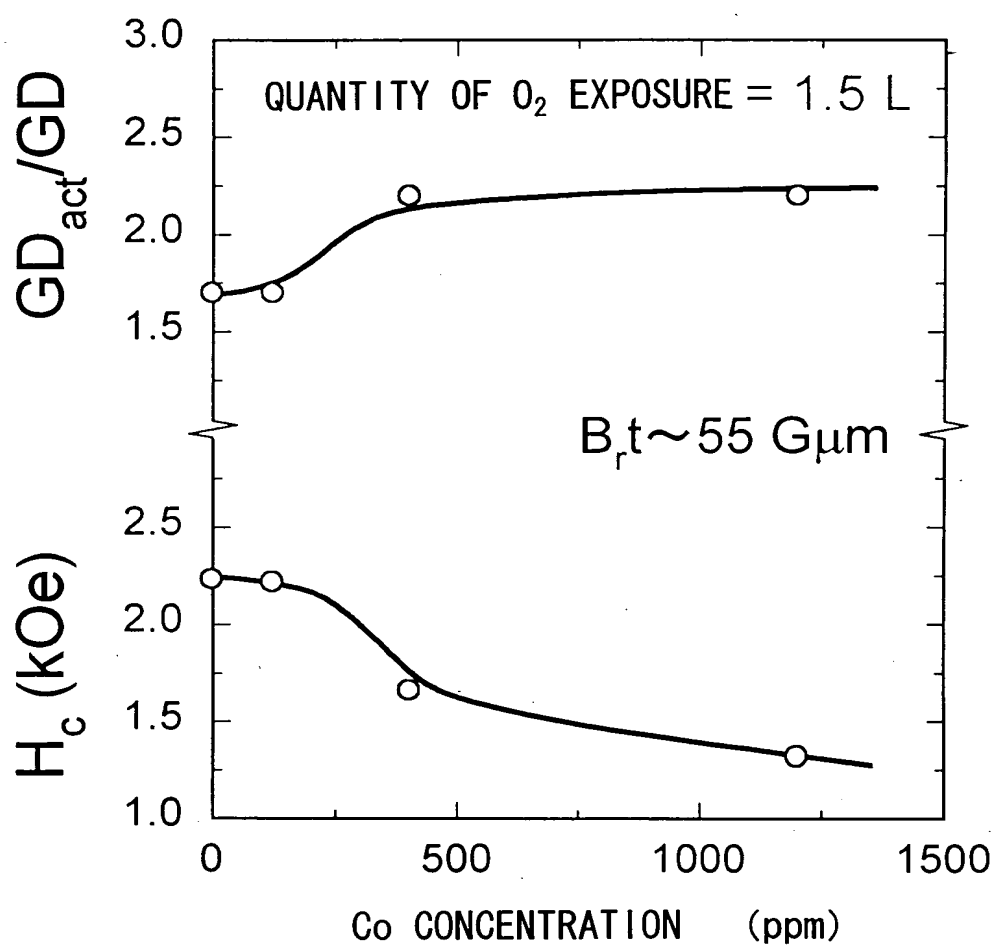


FIG. 33

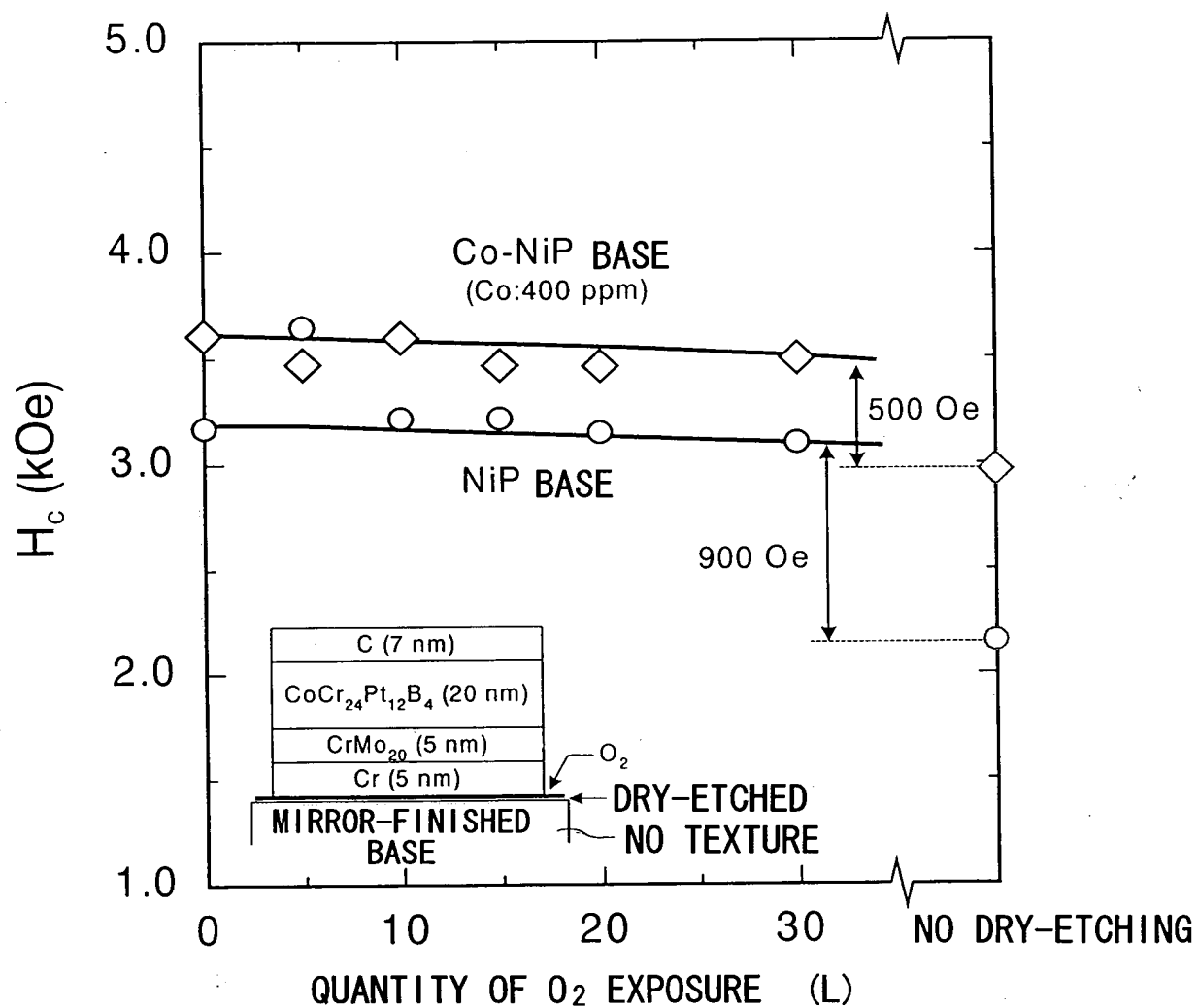


FIG. 34

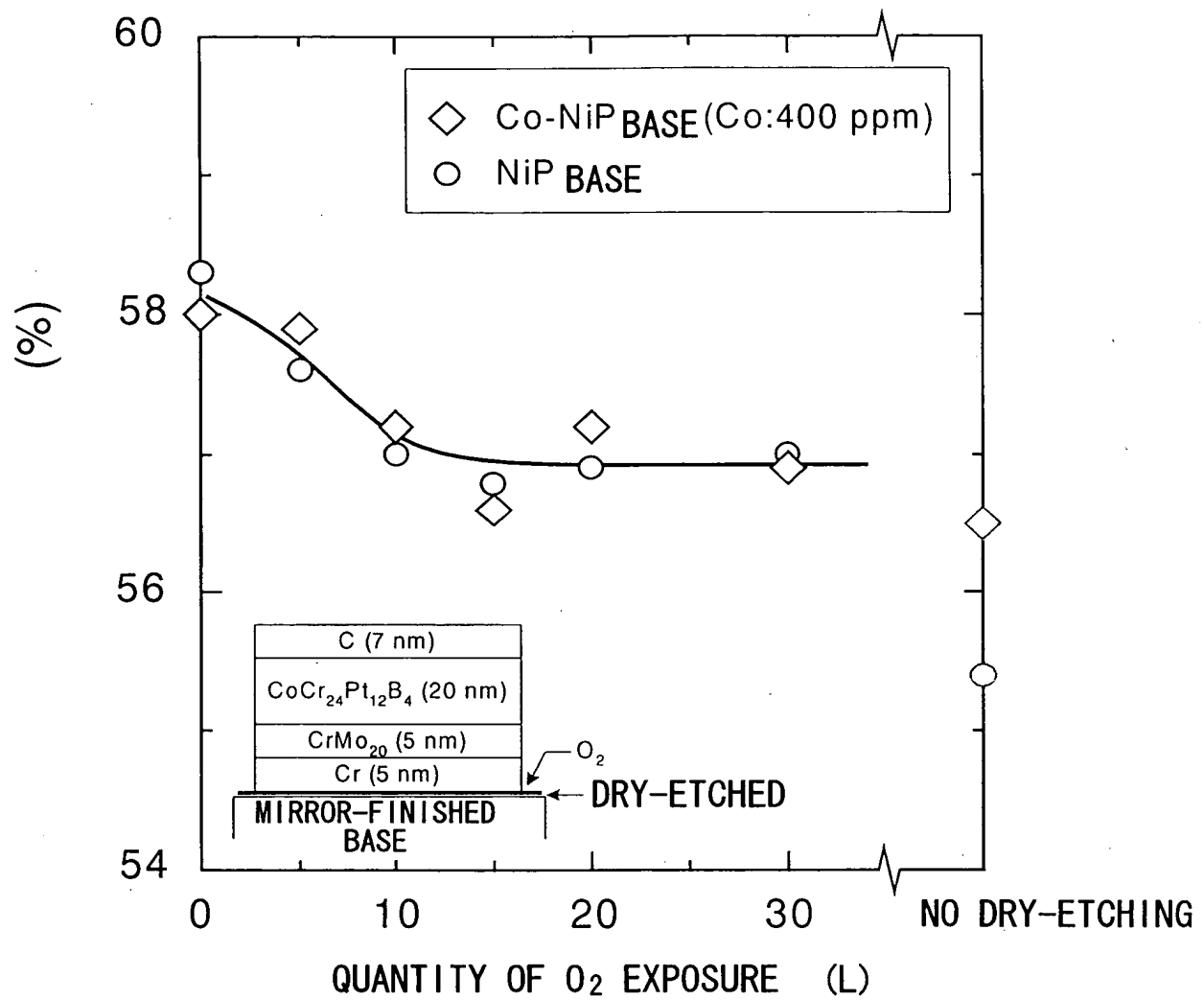




FIG. 35

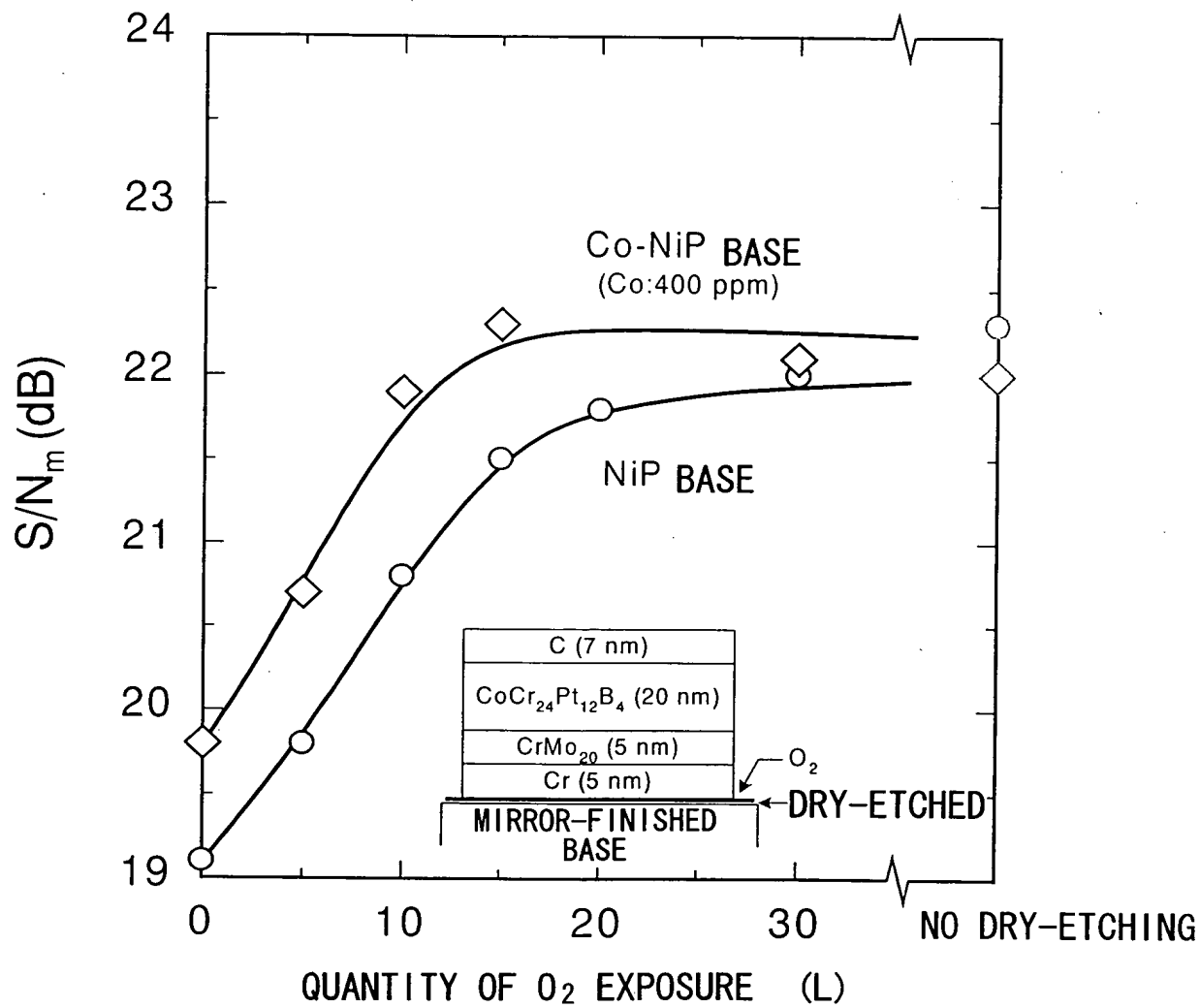


FIG. 36

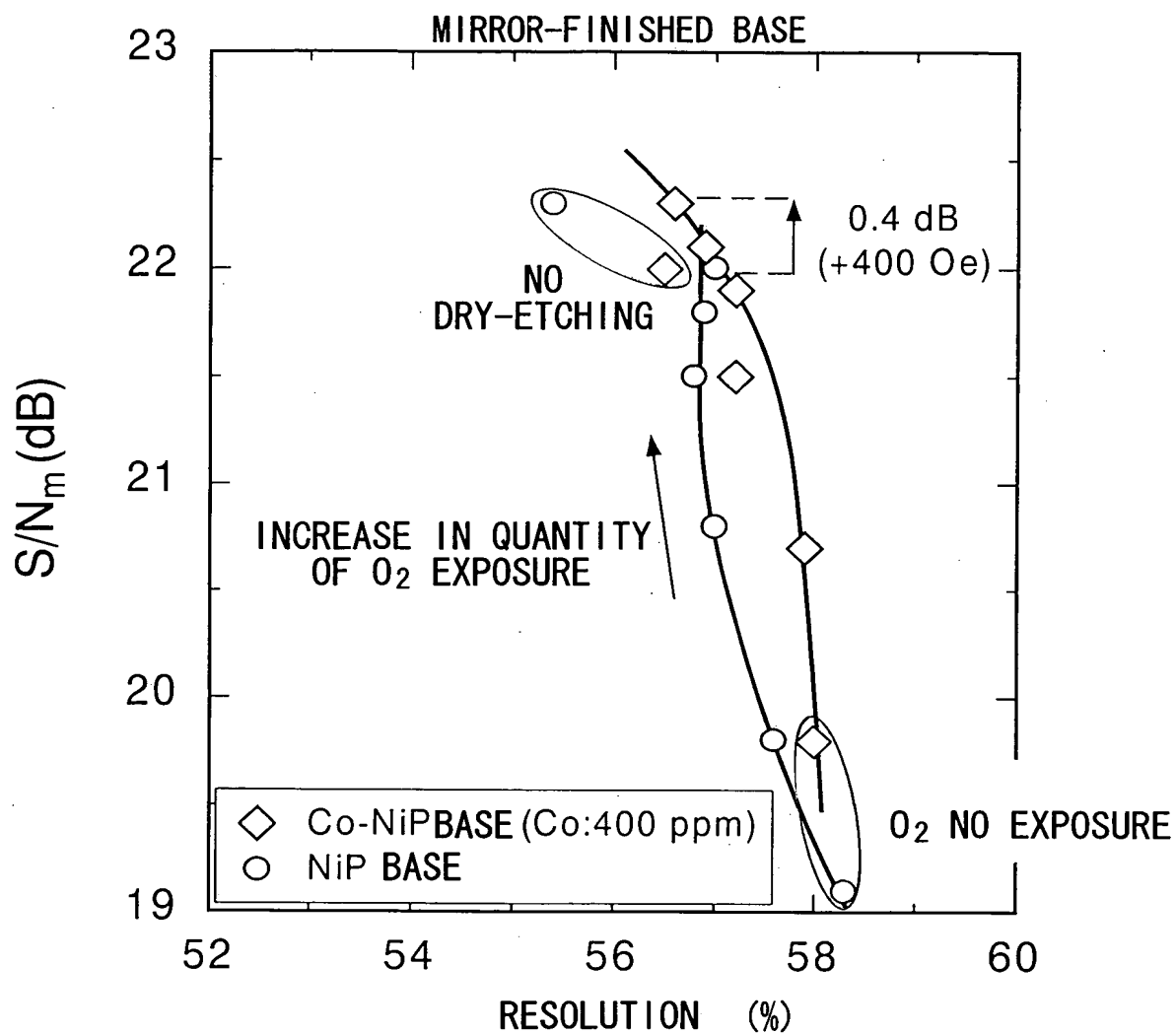


FIG. 37

